COMMODORE

COMPUTING INTERNATIONAL

JANUARY 1989

DRIVE INTO THE FUTURE!

COMPUTERS WITH WHEELS!

SUPERCHIPS!

MIDNITE ASSEMBLY

THUNDERBLADE STORMS IN!

EMLYN'S GREAT INTERNATIONAL SOCCER!

THE AMAZING MIDDLE EARTH!

CYBERNOID II

DEATH LORD

ERYX GAMES SUMMER EDITION

£1.20

BELGIUM FR118
USA $3.50
GERMANY DM7

PLUS ALL THE MEGASTARS OF '88! AND MUCH, MUCH MORE!!

WIN FABULOUS PRIZES IN OUR FANTASTIC COMPETITIONS!!!

THE AMAZING AMIGA . . .

COMMODORE AMIGA 500

Pack Includes:
A500 CPU, Mouse, P.S.U., T.V. Modulator, Very First Tutorial, Workbench 1·3, Basic, Extras and Manuals.

PLUS POSTRONIX BONUS PACK
WORTH OVER £250 which includes 10 Blank Disks, Disk Storage Box, 10 Excellent Games, Mouse Mat, Mouse Bracket (Mouse Holder) Deluxe Paint.

£399.00 + £5.00 post and packing

AMIGA 500 PLUS DISK DRIVE

Instruction Manuals, Extra Disk, Workbench 1·3, The Very First Tutorial, T.V. Modulator, Photon Paint, Mouse **PLUS** additional Amiga Compatible Disk Drive and 10 Blank Disks.

£449.00 + £5.00 post and packing.

AMIGA 500 + 1084S STEREO/ COLOUR MONITOR

(including the Amiga 500 deal) **£649.00**
+ £10.00 post and packing

1084 HIGH RESOLUTION COLOUR MONITOR

1084S STEREO/COLOUR MONITOR

Compatible with PC, Amiga, C64c, C128

£259.00
+ £5.00 post and packing

MPS 1500C

MPS 1200P

MPS 1200P

£229.99
+ £5.00 post and packing

The Commodore MPS1200P printer presents the state of the art in dox matrix printers, with all the features of a printer that would cost much more. The MPS1200P is designed to be like three printers in one. It can act just like an Epson FX printer, or with the flip of a switch, it can act just like an IBM Graphics Printer with IBM Group II-I character set (Danish/Norwegian character set) support. It can also print all the characters available with the Amiga in the Amiga configuration. The MPS1200P is capable of all the printing functions you would expect, as well as some additional features you may not expect.

MPS 1500C COLOUR PRINTER

£199.99
+ £5.00 post and packing

A. TECHNICAL CHARACTERISTICS
PRINTING TECHNIQUE .....Impact dot matrix (9-needle print head).
DRAFT MODE ..... – matrix: 9 vertical dots x (5 + 4) horizontal dots; – print speed: 120 char/s, at 10/char in
TABULATION SPEED .....2 char/s
PRINTING DIRECTION .....bi-directional, with optimised head movement
PRINT PITHES .....10 char/in to 24/char/in programmable from line, and in SET-UP mode
LINE FEED ..... – 1/6in (4.23 mm), 1/8 (3.17 mm) and 7/72 in (2.4 mm); – n/216 in and n/72 in.
CHARACTER SET .....ASCII characters and special characters.
MAX. PRINT LINE LENGTH .....40 top 192 characters, according to print pitch selected.

AMIGA 1010 DISK DRIVE

AMIGA 1010 DISK DRIVE

Amiga 3.5" external drive. Capacity 880K
PLUS FREE DISK STORAGE BOX & 10 BLANK DISKS

£149.99
+ £5.00 post and packing

A501 RAM PACK

512K for the Amiga

£149.99
+ £5.00 post and packing

. . . AND MORE BESIDES!

COMMODORE OLYMPIC PACK

THIS TOPICAL GAMES COMPENDIUM OFFERS A TRUE SPORTING CHALLENGE

Pack contains: C64c Computer 1530 Datasette, Quickshot Joystick, Matchpoint (Tennis), Snooker, World Championship Boxing, Daley Thompsons Supertest, Hypersports, Basketball, Matchday II, Daley Thompsons Decathlon, Basket Master, Track and Field.

PLUS POSTRONIX BONUS PACK OF £100 OF FREE SOFTWARE

£149.99

+ £5.00 post and packing

COMMODORE FAMILY ENTERTAINMENT

AN EXCELLENT PACK PROVIDING HOURS OF ENTERTAINMENT FOR ALL THE FAMILY

Pack includes: C64c Computer 1530 Data Cassette, Quickshot II Joystick. Personal Hi-Fi, Commodore Juke Box Audio Tape (10 Hits), Yamaha SHS10 FM Digital Keyboard with Midi, Ghostbuster, Rollaround, Tau Ceti, Agent X11, Surprise Game.

Plus: POSTRONIX BONUS PACK OF £100 OF FREE SOFTWARE

ONLY **£199.99**

+ £5.00 post and packing

1541 DISK DRVE PACK

1541 II DISK DRIVE PACK

Pack includes:
1541 II Disk Drive, 10 Excellent Disk Games, 20 Blank Disks, 5¼" Diskette Storage Box. AND GEOS!

£169.99

+ £5.00 post and packing

THE HOLLYWOOD PACK

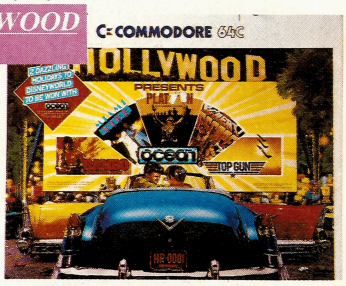
A GREAT DOUBLE THEME PACK OFFERING THE BEST OF HOLLYWOOD, PLUS A COMPENDIUM OF T.V. GAME SHOWS

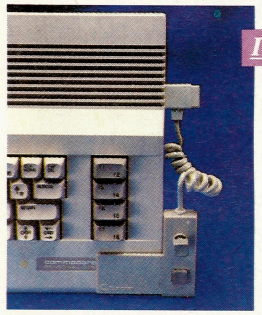
Pack includes: C64c 1530 Data Cassette, Quickshot II Joystick, The Great Escape, Miami Vice, Platoon, Rambo, Top Gun, Every Second Counts, Blockbusters, Bullseye, Trivial Pursuit, Krypton Factor.

Plus: POSTRONIX BONUS PACK OF £100 OF FREE SOFTWARE

ONLY **£149.99**

+ £5.00 post and packing





ICONTROLLER

ICONTROLLER

Icontroller is semi permanently mounted on your computer console. Icontroller leaves hands on the keyboard while executing Icon commands with your fingertips.

£15.99

COMMODORE ADD-ONS

A) 1750 RAM EXPANSION MODULE FOR CBM 128

Simply plug it into the expansion port on your CBM 128 and 512K Bytes of additional Ram are available.

B) 1351 COMMODORE MOUSE

The Commodre 1351 Mouse is controller designed for use wth the CBM 64/128.

C) 1764 RAM EXPANSION MODULE FOR COMMODORE 64

How do you get a total of 320K Ram on your 64, just plug in the 1764 Module.

A **£149.99** B **£19.99** C **£99.99**

All prices + £5.00 post and packing.

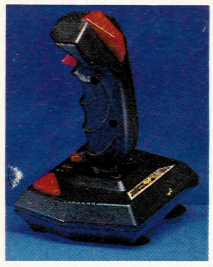
SEIKOSHA PRINTER

SEIKOSHA PRINTER

Compatible with most makes of Commodore computers. Features variety of fonts including graphics and near letter quality, reverse printing, italics, tractor feed and paper seperator. Comes complete with serial cable.

£159.00

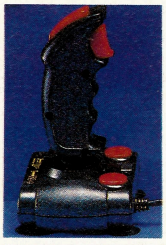
+ £5.00 post and packing



STARFIGHTER

Compatible with Sinclair Spectrum, Commodore. Atari Computers. Atari 2600 Video Games Systems.

£14.95



CHEETAH 125+

Compatible with Spectrum. Commodore. Atari 2600 Video System. Atari. Amstrad PC. Amstrad.

£8.95

SLIK STIK JOYSTICK CONTROLLER

Compatible with Atari Computers. Atari Games System. Commodore.

£6.99

RAM DELTA DELUXE MICROSWITCH JOYSTICK

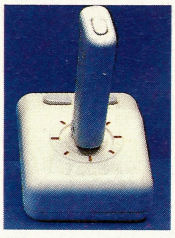
Compatible with Atari computers and Video Games Machines. Amstrad PCW (with adaptor). Spectrum (with adaptor). Commodore.

£9.99

CHALLENGER DELUXE

Compatible with Spectrum (with optional interface). Commodore. Atari 2600 Video System. Atari Computers. Amstrad computers.

£4.99



TAC 5 CONTROLLER JOYSTICK

Compatible with Atari. Commodore.

£13.99

COMPETITION PRO 5000

Compatible with Commodore 64 and Vic 20. Sinclair ZX Spectrum (interface required).

£14.95

TAC 2 CONTROLLER JOYSTICK

Compatible with Commodore 64 and Vic 20. Atari Computers. Atari Game Systems.

£10.99

MICRO HANDLER MULTI FUNCTION JOYSTICK

Compatible with Commodore. Commodore C16/+4 (adaptor required). Atari.

£24.95

ONLY AVAILABLE FROM POSTRONIX LTD

A whole new range of innovative computer covers, made from durable clear plastic. Designed to fit your computer perfectly … not only safe from dust but also all forms of accidental damage.

C64 OLD STYLE	£6.99
C64C NEW STYLE	£7.99
AMIGA 500	£9.99
ATARI 520ST	£9.99
ATARI 1040ST	£9.99

LARGE STOCKS OF SOFTWARE & ACCESSORIES FOR ALL 16 BIT, 8 BIT COMPUTERS – ALSO ALL MAJOR GAME CONSOLES – PHONE (0604) 791771 NOW WITH YOUR REQUIREMENTS.

postronix

TITLE (TICK) MR. MRS. MISS | INITIALS | SURNAME

ADDRESS

SEND YOUR ORDER TO:
POSTRONIX
NENE ENTERPRISE CENTRE
FREEHOLD STREET
NORTHAMPTON NN2 6EW

OR PHONE 0604 791771
24 HOUR ORDER SERVICE

ALL SOFTWARE ITEMS ARE INCLUSIVE OF P/P. ALL HARDWARE ITEMS ARE £5.00.
FOR NEXT DAY DELIVERY £10.00 P/P. (CREDIT CARD & CASH ORDERS ONLY).

CUSTOMER NO (IF KNOWN) | POST CODE

AC/DBNOV

CATALOGUE ITEM NO.	DESCRIPTION	ITEM PRICE	QTY	TOTAL PRICE

IF YOU REQUIRE A FREE CATALOGUE PLEASE TICK ☐

PLEASE DEBIT MY CREDIT CARD

SIGNATURE ..... DATE .....

(CARD HOLDERS PLEASE STATE EXPIRY DATE)

OR ENCLOSE CHEQUE/ POSTAL ORDER FOR £ CHEQUE PAYABLE TO POSTRONIX

SEE NOTE

TOTAL GOODS
POSTAGE & PACKING
GRAND TOTAL

OFFER APPLIES TO U.K. ONLY. OVERSEAS ORDERS CHARGED AT OVERSEAS RATE.

THE COMMODORE MAGAZINE WITH EVERYTHING

Inside COMMODORE COMPUTING INTERNATIONAL

JANUARY 1989 VOL 7 NO.5

CCI View 5
News 6,8,13,14,16,18,20
Driving In The Future — Computers With Wheels 10,11,12
Super Chips — Review 21,22
Compunet 24
CCI Subscriptions 25
Competition — Thunderblade 26
Averager — Hints & Tips 29.30
Opinion — Jeff Minter 32
AUI Subscriptions 33
Geo Spell 34
A. I. on the Commodore 36,37,38,40
Fastload — Review 44
Midnight Assembly — Review 45
Book Reviews 46,47
Empire — Review 49
Emlyn Hughes' International Soccer — Review 50,51
Computer Leisure Awards 53
Game Over II — Review 54
Trivial Pursuit II — Review 55
Inside Trader (PC) — Review 56
War in Middle Earth — Review 58,59
Chart Chattering Events 61
Horgan's Hints 62,64
The Games: Summer Edition — Review 66,67
Cybernoid II — Review 68
Typhoon — Review 69
Mad Mix — Review 72
Death Lord — Review 74.75
Turbo Cup — Preview 76
Pacmania — Review 78
Hotshot — Review 80
The Megastars '88 83,84,86
Loadsa Playables! Compilations 88,89,92
Thunderblade — Review 94,95
Adventure World 96,98,99,100,102
Competition Winners 106
Competition — Trilogic 107
Technical Letters 108,109
Newsroom Offer 110
Covers Offer 111
Moonwalker — Film Review 113
Programs
Ice Hockey — Plus 4 ..... 112,113,114,115, 116,117
Program Submission 117
Black Jack (Part II) 118,119,120,121,122,123
Mob Positioning 124,125,126
Classified Advertisements 127,128
Advertisers 'Directory 130

CCI View

Dear CCI Reader,

In the letters pages this month, there are some very interesting and sharp points made by readers. One launches into an attack on Commodore, another suggests sponsorship could lower the price of software. "CCI is helping the pirates!" goes one accusation and another reader says that there ought to be different reviews for cassette and disk versions of games. Very often readers letters are the clearest sign of the kind of person buying a magazine. In each of these the case is well-argued, even if we might disagree. They are, as usual, with CCI readers well worth listening to especially if you want to find some controversial stuff. At CCI we like to hear what you are thinking about even if we are the ones you take out your frustrations on. Please keep your letters coming and go on telling us, in no uncertain terms, what it is bugging you.

Although this issue of CCI is dated January 1989, for production reasons, it is prepared as early as November 1988. This means that we cannot include all the flood of games that pours out, in ridiculous competition some think for a limited number of buyers at the end of the year. Can there be too much choice of games? Yes, there can, good material is sunk out of sight in the unnecessary overload. Especially, as at some other time it might be better launched and accepted. But the software industry, especially the entertainment side, follows fashion slavishly. If one company buys a big arcade license then another has got to follow suit. Christmas? It doesn't matter if every one is bringing out loads of games, everyone has got to get theirs out too!

Oh well, a little sanity may be restored by looking into the future . . . The future won't be perfect but to judge from our feature on cars and computers at least what goes into them is going to be very useful indeed . . .

Someone has said that the car was not properly "invented" until the 1930's and since then we have just been perfecting it. If you apply the same idea to computing technology you could guess that we might be only about a tenth of the way toward "inventing" the computer. So it is not surprising to see the electronic developments in cars outpacing those in other "domestic" environments.

However as we face another year, looking back — as we do in another feature on the "megastar" games — the standards of programming especially on the 64 and the Amiga have risen enormously. Programming tricks and improvements spread quickly among the software community and the real innovators startle us only for a short time. The extraordinary soon becomes the accepted norm . . .

In 1988 we have seen a big jump forward, bigger than many might have thought would happen. If we move on at the same pace through 1989 — and technology never seems to slow down — where we will be in a year's time is hard to imagine. Only human nature doesn't seem to change and I'll bet you there will be another flood of Christmas games, and more crazy competition to impress, dazzle and get you to spend your money on the lastest extra-special product. And all the time technology will be speeding on . . .

From all of us at CCI, have a great 1989 and no matter how fast it goes, enjoy every minute of it!

Antony H. Jacobson
Managing Editor and Publisher

CCI EDITORIAL ASSISTANT

Would you like to work on CCI and other magazines? We have a position for an Editorial Assistant. No, we don't need another games reviewer. We want someone who is computer literate to a reasonable standard — probably who has used several machines and is 18 or over. S/he should live in or close to London, or be prepared to move to North London:
Antony Jacobson
Managing Editor, CCI, 40 Bowling Green Lane, London EC1R 0NE.

WIN! A RADIO-CONTROLLED THUNDERBLADE! A HAMPER FROM MARIA WHITTAKER AND SOME TERRIFIC TRILOGIC PRIZES

Managing Editor and Publisher ..... Antony Jacobson
Features Editor .... Anthony Mael
Staff Writer ..... Tony Horgan
Production Manager ..... Keith Miles
Production Controller ..... **Sandra Gallagher**
Special Offers Executive ..... Sammi Gaist
Marketing Manager ..... James Mack
Advertisement Manager ..... Billy Brown
Advertisement Executive ..... Michelle Singlehurst
Advertisement Executive ..... Paul Monaf
Finance Director ..... B.J. Lewis M.S.C.F.C.A.
Financial Controller ..... Raj Kaushik
Consultant Art Editor ..... Graham Baldock
Assistant Art Editor ..... Rico Gusman
Contributors ..... Bob Chappell ..... Bob Colyer ..... Jonathan Littlewood ..... Jack Cohen ..... Andy Eskelson ..... Peter Gerrard ..... Peter McDonald ..... Jeff Minter ..... Rainer Gellert ..... Len Keighley ..... Christopher Doig ..... Mark Manning ..... Andrew Dee ..... A.A. Protano ..... Dan Morgan ..... Daphne Moss ..... Andy Moss ..... Zack Mule Skinner ..... Nigel Streeter ..... Bud Vennos
Competition Controller ..... Teresa Genève
Telephone 01-278 0333
Editorial ext 274
Advertising ext 280/286
Subscriptions ext 274

Published by Croftward Limited
Finsbury Business Centre
40 Bowling Green Lane
London EC1R 0NE
Distributed by Comag,
Tavistock Road, West Drayton,
Middx. UB7 7QE
Typsetting
Bedfordshire Graphics
Printed by Chase Printers Group

Commodore Computing International — an Independent magazine for Commodore computer users — is not connected in any way with Commodore Business Machines UK Ltd. It is published 12 times per year by Croftward Limited. The publishers do not accept liability for any incorrect statements of errors contained in material from independent sources or authors which may be reproduced from time to time.

© Croftward Limited 1989

IBM clean up costs $82m

IBM will spend over $82 million to clean up a massive toxic chemical spill in Silicon Valley that is threatening the drinking water of local residents with cancer causing chemicals.

The Silicon Valley Toxics Coaliation — an environmental group — fears that the clean-up operations will endanger the health of local residents.

Ted Smith, director of the group, said: 'IBM has been told by the regional water quality control board that it must recycle all the water from the tainted undergroun acquifiers. There is no way that all that water can be used for agricultural irrigation. Some of it will have to be used for drinking water.' The IBM clean-up operation involves treating over 1 billion gallons ayear of contaminated underground water.

After treatment, the water will still contain minute levels of chemicals used in electronics, manufacture which are linked to cancer and heart disease in humans.

Chemicals from the IBM site have spread for up to five miles and have forced the closure of wells used for drinking water. IBM estimates it will take up to 20 years to remove the chemicals from the water. As one of the first results of a new environmental statute in California IBM has been forced to pay $82 million to clean up the area it occupies in Silicon Valley.

Gremlin's 'Total Destruction and Devastation'

Watch out for The Muncher — it's a game Gremlin tells us of 'total destruction and devastation'. You control the exploits of a rather large and angry pre-historic monster who is out to destroy everything he runs in to. All the drama takes place in Japan where some explorers have unearthed and stolen some eggs and brought them home with them. The game begins as you arrive on the coast of Japan in search of the lost eggs which have been scattered around the cities. Of course the armed forces are swarming about the towns like ants and you subsequently have to battle your way through the cities and army based carrying out your plan of "urban redevelopment" as and where the fancy takes you!

During the course of your journey, you'll come across the lost eggs. Once you have located them the search will be on to find a nuclear waste dump in which to bury them. Not only are these sites very tasty and invigorating, but you'll also want to lay more monster eggs there too. Utilising these sites, you'll create more monsters to carry on should you fail.

Since Japan is such a small place (only as big as the U.K.!), and with all this monster activity in the surrounding sea, it's not surprising that you will encounter other monsters during your exploits. Like you, they too feel a rather intense need to express their deeper emotions by means of violence and destruction. If you are to succeed in your mission you must defeat all three enemy monsters.

Available from Gremlin on Commodore 64/128k cassette and disk.

Barry McGuigan — By Fair Means or Foul

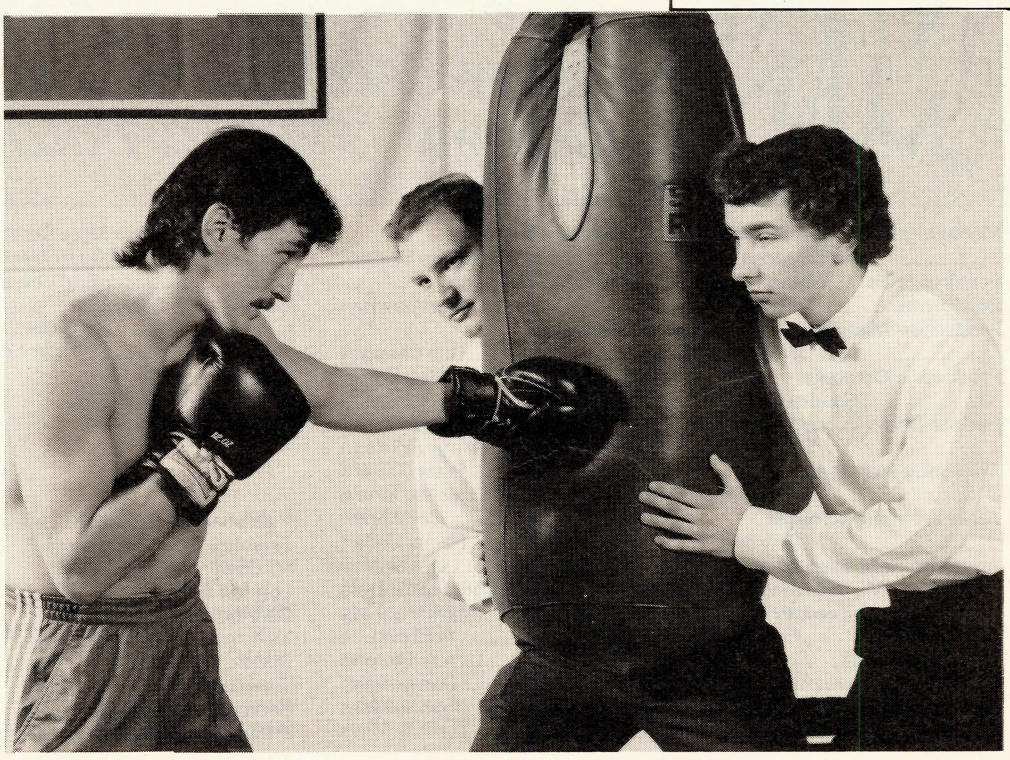
Taking time out after a long sparring session, Barry McGuigan, probably the UK's most respected boxer of recent years, took on a new and unique opponent — the new Superior/Alligata game By Fair Means or Foul.

Billed as the first truly realistic boxing simulation game, By Fair Means or Fou allows you to use moves that would make the Marquess of Queensberry turn in his grave. Since he compiled his rules for boxing at the end of last century, Head Butts (South Korean style!), Kneeing, Groin Punches and Kicking have all been outlawed and the referee will disqualify anyone who uses them. Unless he isn't looking!

That's where the skill comes in. In By Fair Means or Foul you can use a wide range of punches, including those foul ones outlawed so long ago, but you'll only get away with them if the ref is distracted. By both skill and stealth, you fight your way from rank-outsiders to World Champion — a struggle which is familiar territory to Barry McGuigan.

Prize Competition

If you succeed in becoming the World Champion in the game, you can enter our competition, with prizes of superb boxing trophies, £200 and congratulatory certificates signed by Barry McGuigan. Commodore 64/128 (C) £9.95; (D) £11.95.



PC Hungary

PCs including CBMs are becoming popular in Hungary. Of computers in the country 32.6% are PCs, and 66% of those are made in the West. In the first half of this year 3,320 Hungarian made PCs have been sold.

COMMODORE 128 COMMODORE 128 COMMODORE 128 COMMODORE 128

F.S.S.L

FINANCIAL · SYSTEMS · SOFTWARE · LIMITED

BASIC 8

Unleash the hidden graphics power of your 128. At last, your Commodore 128 can rival the 16 bit micros! Imagine your 128 in 80 columns producing a resolution of 640 x 200 in mono and 640 x 192 in 16 colours without any additional hardware! Sounds impossible? Not with Basic 8, the new graphics language extension.

Basic 8 adds over 50 Hi-Res graphic commands to C128 Basic. Just select one of the many graphics modes and draw 3-D lines, boxes, circles and a multitude of solid shapes with a single command. We've even added commands for windows, fonts, patterns and brushes.

To demonstrate the power and versatility of this graphics language, we have created Basic Paint, a flexible icon-based drawing application program. Basic Calc, a full featured spreadsheet and Basic Write a simple to use word processor with a multitude of fonts. Also included is an icon based desk-top utility which provides quick and convenient access to each of your own Basic 8 creations.

All this graphics potential is yours for **£34.95**, 64k Video RAM upgrade kit **£19.95** and The Beginners Guide to Basic 8 with disk **£19.95**.

Basic 8 Tricks & Tips Volume 1

NEW

This book and disk package explains with the help of demonstrations the necessary routines to display five different screen resolutions: 640 x 400, 640 x 480, 720 x 480 and 752 x 600. This means that you can equal the display power of both the Atari and Amiga 500. As a bonus we have included a program to demonstrate how to use a total of 128 colours within Basic 8. Book and disk. **Only £4.65.**

1541/71 Disk Drive Alignment Package

Problems with your disk drive? The alignment package reports the alignment condition of the disk drive as you perform adjustments. On screen help is available while the program is running. Includes features for seed and head stop adjustment. Allows you to test each full and half track as you realign the drive. Complete instruction manual on aligning both 1571 and 1541 drives. Even includes instructions on how to load the alignment program when nothing else will load. Works on the C64, SX64 and 128 in 64 or 128 mode. **Only £24.95.**

1571 FIX ROM

Are you experiencing any of these problems with your 1571 disk drive, Errors when using Superbase? Device Not Present Errors? Major problems when 2 or more open files? Takes forever to recognize a floppy disk? If you have one or more of these problems then you need 1571 FIX ROM, developed by Commodore Inc USA, just plugs in, solves over 19 main problems. **Only £24.95.**

Commodore 1581 Disk Drive

The New Commodore 1581 drive is now available for the C128 or C64. This drive offers one megabyte of memory, THREE THOUSAND ONE HUNDRED AND SIXTY blocks free, (800K formatted capacity), and a very fast EIGHT THOUSAND Characters per second loading rate. Software for this new drive includes, VizaWrite Classic, HackPack, Petspeed, Oxford Pascal, CAD PAK, Chart Pack, Fontmaster, Spellmaster and much more. Using a package called Super 81 Utilities most software can simply be copied across to the new format. The drive is available for – **£184.95.**

Warp Speed

An incredible accelerator cartridge for the Commodore 128 and 64. Warpspeed has a switch that allows you to select 128 or 64 mode. The features of this cartridge apply to 1541, 1570, 1571 and 1581 disk drives in 64 or 128 mode. These features include loading, saving, formatting and verifying 10 times faster, extended DOS commands, print screen, disk and file copy, built in machine monitor, built in track and sector editor and much more. **Only £34.95.**

The Big Blue Reader

New from SOGWAP Software Inc., The Big Blue Reader is ideal for those who use IBM PC compatible computers at work and have the Commodore 128 or 64 at home. The Big Blue Reader is not an MS-DOS emulator, but rather a unique and easy way to transfer word processing, text and ASCII files between two totally different formats, Commodore and MS-DOS. The Big Blue Reader requires a 1571 on both the Commodore 128 and 64 and will not work with a 1541 or similar drive. **Only £44.95.**
(Upgrades £7.50)

Twin Cities 128

NEW

This is not just another book, it is the new Bible for all 128 users. It contains hardware and software reviews, rumours, opinions and mayhem about the 128 over the last two years; software tricks for most common packages; exploring and programming the 128 and machine language programming. Other topics covered include CP/M, all add-ons including the 1581, 1571 and 1750 RAM units, choosing software, Basic 8, expanding your 128, GEOS, graphics and sound. This book was written by the well known Commodore names, Jim Butterfield, Todd Madson, Fred Bowan and Loren Lovhauq. **Only £12.95.**

The Programmers Notebook

NEW

The Programmers Notebook is a high speed data storage and retrieval system designed specially for the programmer. With Programmers Notebook you can develop a special programming information database tailored to your own needs. It will provide a means of indexing your short routines and other programming information. Each entry has a brief description, date and type of routine. Once entered you can conduct tailored searches on the entire database, in fractions of seconds, looking for any information you select. It will sort, compile, display and provide printed copies in almost any format you desire. **Only £24.95.**

Home Designer 128

NEW

Forget the name this is not a kitchen planner, it is probably the most advanced CAD system for the C128 computer. Home Designer allows you to create extremely detailed and accurate drawings at virtually any scale, with any resolution approaching a plotter. It offers accurate scaling, a powerful command set and up to five drawing layers. Why is Home Designer better than the rest? It is the only CAD system which allows layers of diagrams to be drawn and then laid upon each other in any order. Home Designer has an advanced zooming feature, allowing you to actually increase the drawing resolution, unlike other programs which simply display fat dots on the screen. Most dot matrix printers and plotters are supported and Home Designer works with a Commodore 1351 mouse.
Only £34.95.

Super Pack 2

NEW

Super Pack 2 is the combination of three packages, Pocket Writer, Filer and Planner. The integrated word processor, spreadsheet and database work on the Commodore 64 or 128 in 40 or 80 columns. Each package has all the features you would expect, plus a few you would not. The word processor displays on screen bold, underline, italics, sub and super script fonts as you type. The spreadsheet includes a sideways printing feature as well as 16 digit accuracy, plus a graphics module to produce bar, line and pie charts quickly and easily from your data. The database includes a report writer to create your own professional reports. Full details available on request. Super Pack 2 by Digital Solutions Inc is available for only **£64.95**

Super Disk Librarian

Super Disk Librarian will catalogue up to 1,000 disks and 15,200 programs. Do you have a lot of disks full of programs? Have you ever lost a program which you knew you had somewhere? Then Super Disk Librarian will provide you with a simple means of sorting and indexing the file names. Once the disks have been catalogued, numerous reports and lists can be printed and the library sorted and searched. Super Disk Librarian for the Commodore 128. **Only £29.95.**

The CP/M Kit & Users Guide

The CP/M Kit introduces and explains the unknown, third mode of the C128. The CP/M Users Guide is a 300 page book by Abacus Software covering all aspects of CP/M. Subjects which include the system disk, resident commands and disk copying are described in detail. The CP/M kit contains over 20 CP/M programs including a word processor, chess game and a disk cataloguing program accompanied by a detailed guide to running programs in CP/M. The CP/M kit and Users Guide.
Only £34.95.

Super Disk Utilities

The ultimate utilities disk for the 1571 disk drive and C128 computer. Copy whole disks with 1 or 2 drives, change disk format, perform CBM DOS, CP/M and MS-DOS utility functions, scratch, unscratch, lock and unlock files, write protect disk, contains disk editor, drive monitor, unique RAM writer and more.
Only £24.95.

Merlin 128

Merlin, a complete macro assembler editor system for the 128. It includes a full screen editor, sourceror to disassemble programs, print filer to save assembled listings as text files and a relocating linker. It supports local and global labels, entry and external label definitions, and includes several macro libraries. Merlin 128 is supplied with example programs and a detailed manual.
Only £49.95.

● Commodore 1351 Mouse	£29.95
Chartpack 128	£29.95
CADPAK 128	£29.95
Super C	£39.95
Cobol 128	£29.95
RAMDOS	£29.95
Word Writer 128	£39.95
Swiftcalc 128	£39.95
Data Manager 128	£39.95
Fontmaster 128	£49.95
GEOS 128	£32.95
Super Base	£29.95
The Great War	£14.95
Vizastar	£74.95
Vizawrite Classic	£54.95
Partner 128	£49.95
1750, 512K RAM Pack	£149.95
Commodore 128D	£374.95
1571 Disk Drive	£184.95
1901 Monitor	£210.95
Anatomy of 128	£9.95
Anatomy of 1571	£9.95
Peeks and Pokes	£9.95
CAD on 128	£9.95
Tricks and Tips	£9.95
Studio Payroll	£39.95
Micro Clerk	£39.95
Xref	£12.95
Cannonball 128	£29.95
Page Illustrator	£29.95

Access VISA

● Order with Access, VISA, cheque or Postal Order, COD and Express delivery available, foreign orders add £2.50 per package. Prices include VAT and postage. Please allow 14 days for delivery.

18 High Street · Pershore · Worcs · WR10 1BG · Tel: (0386) 553153

I.C.P.U.G. Hits Ten

I.C.P.U.G. the Independent Commodore Products Users Group is ten years old. Ten years ago, when personal computing was in its infancy, there were two computers available for home and small-business use. One was the Tandy TRS80, the Commodore PET. Within a few months, in the summer of '78, a group of enthusiasts and computer professionals banded together to form IPUG, the Independent PET Users Group.

Now, ten years on, that group is still active, under its new title of *Independent Commodore Products Group.* With over 4000 members, it has grown to be the largest and most lively independent computer club in the U.K.

ICPUG exists helps and supports users of *all* Commodore equipment. The PET in all its versions is still supported with technical help and a vast software library, but all the later machines are also well catered for. There are software libraries for the VIC20, the CBM 64, 128, 16 and +4, and of course the PCs and the Amiga. Contact: ICPUG, 22 Ivybridge Road, Styvechale, Coventry, Warwickshire, CV3 5PH U.K.

The ICPUG magazine, which enters its 11th year of publication this month, is considered the most authoritative journal of technical information on Commodore Machines in the world.

Compunet goes green

Compunet Teleservices Ltd has announced a new boss Nick Green.

Nick has been brought in to develop Compunet's Open Systems policy. He has particular interests in data compression and in animation which will shape the future evolution of the Component design.

"We're spending this Christmas reminding people of our fourth successful year and talking to users, staff and suppliers about our strategy for the New Year."

Green continues: "By now we must have the largest library of 64/128 software in Europe with special tools for production of Compunet's famous demos in sound and animated high resolution graphics. The users are probably the most talented and technically informed on any online service.

"Last year the Amiga and the Atari ST were selected by Compunet for support. Their superb presentation software interacts with hundreds of programs, demos, and text/graphics frames in our library as well as Compunet's standard-setting real-time chat facility (PartyLine) and multi-user game (Federation II)."

Nick Green has a long history of CBM involvement and worked for Commodore when it set up Component in 1984.

Accodata's Copyholders

INCORRECT operator positioning when entering data into a computer or word processor can cause errors, fatigue and loss of efficiency, say Accodata.

Accodata has now extended its range of manual and electric A4 copyholders to include A3 sizes and versions with swivel arms combined with reading lights and magnifying line readers.

The Accodata manual copyholder, designed to stand firmly on any flat surface beside the PC, is now available in A3 size at £119 is intended to combat this. Adjustable swivel arm versions which clamp to the desk edge and so take up no desk space are now introduced for all styles in A4 and A3 sizes at £62.50 and £80.45 respectively. The ergonomically designed base stand permits the A3 copyholder to be positioned between the keyboard and the screen in the most comfortable position. Correct copy positioning helps to minimise the operator's head movement and avoids unnecessary fatigue, particularly on long intensive data entry jobs.

The deluxe electric copyholder incorporates a foot operated line reader/cursor (£169). An low heat output reading lamp (£70.35) can be added where natural or existing artificial lighting conditions are not ideal. A magnifying line reader/-cursor can be specified if the operator's type of work involves keying in lots of small print data (£26.25) and A3 version of all the above are available.

Contact: Accodata, Tel. (0732) 885555.

Workstation in Orbit

Rexel's new Orbiter workstation, a compact and stoutly built unit is one of a new series of Rexel units designed to provide maximum computer facilities in minimum space.

The top shelf has cable cut-out for vdu and cpu, and the roll-out keyboard shelf, which has a vertical clearance of 65mm, is fitted with an anti-static mat. The printer shelf has a detachable paper catch-basket, and there is a bottom shelf to carry continuous stationery.

The Orbiter is made from tubular steel, with shelves finished in 18mm wipe-clean grey laminate, and it is fitted with easy-glide castors, two of which have brakes. Overall dimensions, excluding the paper catch-basket, are 750mm(W) x 750mm(H) x 525mm(D), costs £169. Action Computer Supplies, Abercorn Commercial Centre, Manor Farm Road, Wembley, Middx, HAO 1WL.

E.A. goes One on One

Electronic Arts has announced the release of Jordan vs Bird: One on One, a basketball simulation which pitches the skills of America's two leading basketball simulation which pitches the skills of America's two leading basketball players, Michael Jordan, top scorer of the Chicago Bulls and Larry Bird, from The Boston Celtics, against each other. It is the follow-up to Electronic Arts most successful sports simulation, Dr J and Larry Bird Go One on One, released in 1983. The sequel showcases graphics, sound and special effects.

Jordan vs Bird: One on One illustrates the unique skills of both players as Jordan "The Slammer" and Bird "The Shooter" compete in three separate events, the classic match-up, One on One, the Slam Dunk Competition, designed by Jordan and Bird's signature event, 3 point Shoot-out.

A statistics screen will tell the real story of the game after every quarter, the shots taken, shooting percentage, three pointers taken and made, rebounds, steals and blocks. Even the crowd participates in Jordan vs bird and Earl Weaver, Chuck Yeager, John Madden and Dr. J are there to watch.

Jordan vs Bird is E.A. say "the ideal program for the office. If the boss comes by just press a button and a spreadsheet will appear." Price £24.95, C64 disk £14.95.

Compumart

A Great Deal More For a Good Deal Less!

Free FAST DELIVERY

(Monitor not included)

AMIGA A500 SUPERPACK

FREE ONLY from Compumart!
Hi-Tech black ash finish computer desk manufactured from highest quality materials and craftsmanship with useful easy-glide drawer. Flat packed for simple home assembly
WORTH £46
When you purchase the Amiga A500 Superpack ONLY from Compumart

Buy this terrific Amiga pack now and you get an A500 with 1 meg. drive, 4096 Colours, Stereo Sound, Mouse, Manuals, Operation System Disks, Speech Synthesis, and Multi Tasking and ONLY FROM COMPUMART . . .

Free PHOTON PAINT WORTH £69.95
Free T.V. MODULATOR WORTH £24.95
Free MOUSE MAT WORTH £5.95

Only **£399**

CREDIT TERMS AVAILABLE

Phone for other great Amiga deals !

PRINTERS

From as little as £159.85 and...

FREE A FREE STARTER PACK with EVERY PRINTER Only from Compumart
- 1000 sheets listing paper
- 1 EXTRA printer ribbon
- Printer interface cable (ST/Amiga/PC-please state type)

WORTH OVER £30

CREDIT TERMS AVAILABLE

		CITIZEN 120D	PANASONIC KX-P1081	CITIZEN LSP 100	AMSTRAD DMP 3250	PANASONIC KX-P1082	AMSTRAD LQ 5000
PRINT	9 Pin	●	●	●	●	●	
HEAD	24 Pin						●
COLUMN	80 Col.	●	●	●	●	●	
WIDTH	132 Col.						●
PAPER	Friction	●	●	●	●	●	●
FEED	Tractor	●	●	●	●	●	●
PRINTER	Draft cps	120	120	175	160	160	288
SPEED	NLQ cps	25	28	30	40	35	96
INTERNAL BUFFER		4K	1K	4K	2K	1K	8K
OUR PRICE		£159.95	£175.95	£182.95	£217.35	£263.35	£428.95

BLANK DISKS

Why buy unlabelled disks when you can have Commodore branded quality at prices like these ! ! !

NEW

5.25" SS/DD 48TPI	5.25" DS/DD 48TPI
£7.95	£9.95
5.25" DS/HD MAX 1.6 MB	3.5" DS 135TPI
£15.95	£17.95

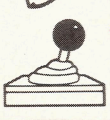
Commodore
The Original Diskette
Higher Quality, Lower Price

SAVE 20%

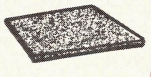
FREE
For a LIMITED PERIOD ONLY
Buy 4 boxes of any one type of disk and get a fifth box **ABSOLUTELY FREE** ! ! !
e.g. Buy 4 boxes of 3.5" DS Disks and receive another box of 3.5" DS Disks FREE OF CHARGE ! ! !
SAVE £17.95

SUNDRIES - For Your AMIGA

LISTING PAPER
2000 sheets 11" x 9½", 60gsm. **£14.95**



JOYSTICKS
The new 'Microblaster' joystick from REPLAY, *order today and Take Control* **£12.95**



MOUSE MATS
High quality Mouse Mats **£5.95**

DISK STORAGE
MD 70L Lockable 3½" disk storage box, holds up to 70 disks. **£12.95**

WITH 2 FREE 3½" DISKS

24HR ORDER HOTLINE (0509) 610444

Superb Service
- Usually same day despatch on most items
- FREE, next working day delivery on all hardware, allow 2-5 days for other items
- Large stocks for immediate despatch
- FAST, efficient service

Great Guarantees
- If any item proves to have a manufacturing fault within 30 days we will replace free of charge or refund in full
- After 30 days and within the warranty period, we will repair at our expense

Better Back-up
- Friendly advice and after sales support
- Any problems quickly resolved to your complete satisfaction
- Special offers to existing customers We aim to please . . . and usually do!

All prices inclusive of VAT

Prices/delivery subject to availability and only applicable to UK mainland, N. Ireland and BFPO's. E&OE
Compumart are licensed credit brokers. Simply ask for written details.

Compumart
A Great Deal More, For a Good Deal Less

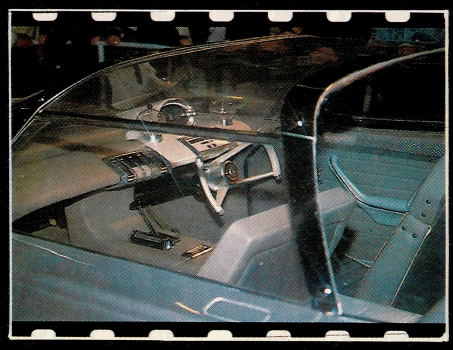
COMPUMART LTD
FREEPOST DEPT. A.U.1.
LOUGHBOROUGH
LEICS LE11 0BR
TEL: 0509 610444
FAX: 0509 610235

COMPUTERS WITH WHEELS

Rico Gusman deserts the airbrush and drawing board for a test drive on the computer literate cars of the future

It seemed like a good idea at the time, asking our editor if I should go up to the Motor Show at the NEC in Birmingham. But getting up at 5.00am on a cold dark October morning, the idea seemed to lose its gloss somehow. . . .

You may be asking 'What is my favorite COMPUTER magazine doing, covering the Motor Show?'. Well the answer is simple. Cars and computers are becoming one and the same machine. There is a current advertisement on U.K. TV showing 'the car of the future' as imagined 30 years ago with all the computerised characteristics available now, not in the year 2000 as predicted then. Already computers control fuel systems, engine tuning, suspension systems, in car entertainment, electronic readouts etc. With navigation systems, telecommunications and the actual driving of the car all just around the corner. At the let's take a closer look at some of the interesting things we can look forward to.



IN-CAR NAVIGATION SYSTEMS

This is one of the most exciting developments that we can look forward to in our cars of tomorrow. The idea of just being to get in a car and receive directions to our destination is something that has been with us for many years, but it is only now that technology has caught up. One company that has developed a system you can use today is Bosch, with their Travel Pilot. This comprises a small pod that fits on to the dashboard and looks like a small green VDU. The idea behind this unit is to enter the vehicle position, and then the final destination, using the buttons on the side of the console. This clever box of tricks then shows the vehicle's position, and then different scales can be selected so that the full route can be shown including local areas by switching on to a higher scale.

The resolution of the maps is very clear including street names. Bosch say that digitised maps are available for the U.K., Germany and France with other European countries in development. Current maps will be updated at regular intervals. This is definitely one to watch for.

Another system that caught the eye is not an in-car system at the moment but a home micro-based system called Autoroute. At present it is for IBM and compatibles and also the Atari ST. But wait for it! An Amiga system is on its way! What this system does, is offer (in my opinion) the most

Map display with EGA screen: in the centre an arrow driven by mouse or keys: on the right the summary of

BOSCH'S VERY COMPACT TRAVEL PILOT

user-friendly nav. system for £149.00. By entering a start position and the destination (including any detours or extra stops) the computer gives a very clear digitised map of your intended route, including an estimated time the journey will take.

This system is fast and efficient, offering excellent value. Mini-cabs and HGV companies could find this sort of system invaluable. Next month we will introduce you to the Phillips CARIN system that is in development.

MOTOR SHOW '88 PART 1

IN-CAR ENTERTAINMENT

Those of us lucky enough to have use of or access to CD's will be in no doubt of the quality and convenience of them in our home Hi-Fi. However it is only now that the electronics companies are perfecting in-car CD players. Early systems suffered from vibration problems and not being very reliable. Today's systems are starting to replace the usual cassette/tuner decks found in top cars, and most manufacturers offer CD decks in their line ups. Alfa Romeo are one of the first companies to offer a CD as standard in

PHILLIPS RDS TUNER/CASSETTE DECK

cont. on next page

Feature

continued from page 11

COMPUTERS — MOTOR SHOW '88 WITH WHEELS

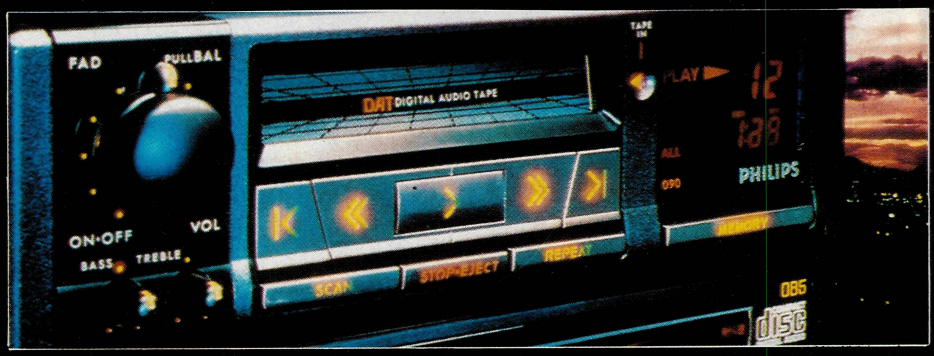
their new Alfa 164 Lusso model.

Some CD decks can even play multiple disks mounted in a special unit in the boot of the car. Is this the end of the tape in cars? Well, yes and no, because in the next few years cassettes may go but just around the corner we will have in-car DAT. For those of you not familiar with DAT or Digital Audio Tape as it is known it is a tape about two-thirds the size of a compact cassette but it can record a signal digitally on an appropriate DAT deck. This means that you will never lose quality from the first recording or the tenth.

Phillips already have a DAT deck for the car. Though it is not available in this country at present but look out for it in 1989. . . .

Another new system that may change the way we drive will be RDS. This is a little like Teletext for the radio. A car radio with an RDS decoder would be able to receive

PHILLIPS DAT TAPE DECK OF THE FUTURE?



the latest traffic updates displayed on the front of the deck. By 1990 most of the country should be covered with transmitters that will send out a tiny inaudible signal with the radio station and the station will also be displayed on the tuner, and as you drive across the country the tuner will automatically keep retuning whilst in the radio stations transmitting area. Having seen this system in operation, it certainly seems very efficient and could help many drivers avoid major roadworks and to have advance warning of an accident somewhere on-route.

Next month I will be looking at CD's that hold maps and other kinds of data and showing you some of the more exotic experimental highly computerised cars that the auto-makers think we may be driving sometime in the not-too-distant future. 'Car of the Future'? You may be driving it sooner than you think!

R.G.

MICROSNIPS LTD

DEPT COMMODORE COMP INT 37 SEAVIEW ROAD · WALLASEY · MERSEYSIDE L45 4QN

COMPUTERS

COMMODORE 128D BUILT IN 1571 DS DISC DRIVE..£399.00
COMMODORE AMIGA PACK.....£399.95
COMMODORE PC-10 RANGE, NOW IN STOCK.....P.O.A.

SENSATIONAL HOLLYWOOD PACK

COMMODORE 64C HOLLYWOOD PACKAGE Inc. Rambo, Miami Vice, Platoon, Great Escape, Top Gun, Trivial Pursuit, Blockbusters, Bullseye, Krypton Factor, Every Second Counts (plus chance to win dazzling Disney World Holiday) Quickshot II, Joystick + C2N Datarecorder

£149.95 bought individually £250.00

HARDWARE

1541C DISC DRIVE (FOR C64/128).....£169.95
1571 DS DRIVE FOR C128.....£199.00
1581 3½" DISK DRIVE C64/128.....£199.00
CBM CENTRONICS LEAD/SOFTWARE.....£19.95
CITIZEN 120D (COMMODORE) PRINTER.....£199.95
EXCELLERATOR DISK DRIVE+FREEZE MACHINE.....£169.95
PANASONIC KX-P1081 PRINTER (CENTRONICS).....£179.95
STAR LC10 (COMMODORE) PRINTER (MONO).....£229.95
STAR LC10 (COMMODORE) PRINTER (COLOUR).....£279.95

MONITORS

MED RES PHILIPS COLOUR.....£249.95
PHILIPS MODEL 80 COMMODORE MONO INC. LEAD £99.95
STANDARD RES PHILIPS COLOUR.....£199.95

UTILITIES

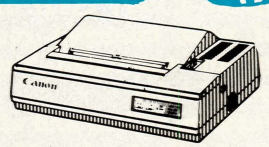
	Tape	Disc
ART STUDIO	£12.95	£15.95
GRAPHIC ADVENTURE CREATOR	£18.95	£22.95
INSTANT MUSIC		£11.95
MINI OFFICE II	£12.95	£16.95
PRINTSHOP		£32.95
PRINTSHOP COMPANION		£24.95
TASWORD		£16.95

ACCESSORIES

ALTAI C64/128 RECORDER.....£24.95
CBM DATACORDER.....£39.95
C64/128 ADAPTOR FOR ANY RECORDER.....£19.95
C64/128 DISC DRIVE/PRINTER CABLE.....£3.99
COMPUTER TV LEAD (2m).....£1.99
DISC NOTCHER.....£4.99
BOX 10 5¼" 3M DSDD.....£9.95
PRECISION (10) BRANDED DISCS.....£7.99
64 C REPLACEMENT CASING FOR OLD 64.....£19.95
LOCKABLE DISC BOX (HOLDS 120 5¼").....£10.95
HEAD ALIGNMENT KIT (SPECIFY MODEL).....£7.95
VIC 20 UHF MODULATOR.....£14.95
MPS 801 RIBBON.....£3.99
MPS 803 RIBBON.....£3.99
STAR NL 10 RIBBON.....£5.99
CITIZEN 120D RIBBON.....£4.95
DATEL MOTHERBOARD.....£16.99
CBM64/VIC PSU.....£24.95
DOLPHIN DOS 64.....£69.95
DOLPHIN DOS 128.....79.95
FREEZE MACHINE.....£24.95
DATA SMART CART.....£29.99
USER PORT RESET SWITCH.....£5.99
C64 VIC LUXURY COVER.....£6.95
1541/1570 DUST COVER.....£4.99
CBM 64C LUXURY COVER.....£6.99
CBM 128 LUXURY COVER.....£6.95
STOP PRESS–AMX C64 MOUSE.....£69.95

JOYSTICKS

KONIX SPEEDKING JOYSTICK.....£11.95
MACH 1 JOYSTICK.....£13.99
NEW RAM MICROSWITCHED JOYSTICK.....£9.95
MICROBLASTER.....£8.95
HANDBLASTER.....£6.95



CANON PRINTER – PW1080A 160 CPS
RRP £375 Our Price £159.95

MICROSNIPS TOP 10

ARCADE FORCE 4.....£9.95
BARBARIAN II.....£9.99
GOLD SILVER BRONZE.....£14.99
FRANK BRUNO'S BIG BOX.....£9.99
LANCELOT.....£9.99
PEPSI CHALLENGE.....£7.99
PAR 4 GOLF COMPENDIUM.....£14.99
BATTLE ISLAND.....£9.95
TERRAPODS.....£9.99
NEW TRIVIAL PURSUITS.....£14.95

1 FREE TITLE

when you purchase any of the above. We will send you one of the latest budget releases worth £1.99 with every top ten purchase.

COMMODORE 64C ENTERTAINMENT COMPENDIUM

Comprising:- Commodore C64C Computer. Yamaha SHS -10 FM Digital Keyboard with Midi (cable and batteries excluded). C2N Cassette Unit. Bush Personal Stereo and Headphones (requires 3 x HP7 batteries). PLUS 6 Great Games and 'Pop' Classics Tape for your stereo. Worth £399.95 Only £199.95

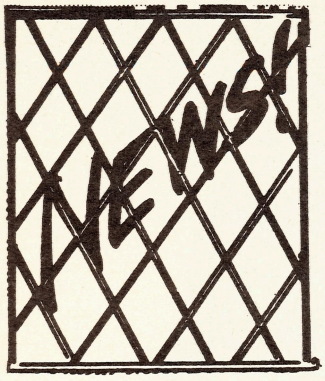
LOMBARD CREDIT CHARGE
LICENSED CREDIT BROKER

MAIL ORDER PRICES TO PERSONAL CALLERS PRODUCING ADVERT

Postage and Packing
Under £50 add £2.00 Under £100 add £5.00
Over £100 add £10 Courier Deliver
Europe – Full price shown covers carriage.
Non-European add 5%.
Visa Mastercharge Postgiro International accepted
NOT Postbalk Postcheque

FREE
SOFTWARE & ACCESSORIES
LIST WITH FIRST ORDER
PROBABLY THE LARGEST RANGE OF COMPUTER PRODUCTS ANYWHERE

051-630 3013
24 Hr. CUSTOMER ENQUIRIES
051-691 2008 MAIL ORDER
051-630 5396 ACCOUNTS
051-639 2714 FAX NUMBER



Hare Today, Gone Tomorrow

Dennis Cross, head of the corporate recovery practive at Peat Marwick McLintock's Cambridge office, has recently found himself in possession of an unusual liquidation asset. It is the internationally famous Jewelled Hare of Masquerade, first made in 1979 as part of the concept of the hugely successful treasure hunt book, *Masquerade* by Kit Williams. It will go for auction at Sotheby's on 5 December.

Mr Cross is handling the winding up of Haresoft Ltd, a computer games company set up- in 1984 to exploit as its first product a game based on the concept of the Masquerade treasure hunt. The first acquired the right to purchase the Golden Hare from its finder for a sum of £20,000.

The story of *Masquerade* concealed a series of elaborate clues to the location of a treasure, the Golden Hare, which has been buried in an earthenware jar in the dead of night at a spot known only to the author and a single witness, the TV personality Bamber Gascoigne.

Immediately the book was published by Jonathan Cape in August 1979, treasure hunters took up the challenge. Reprints of the book had to be recorded to keep up with a huge demand and a total of 4.5m copies were sold worldwide. At one stage, Laker Airways were bringing in charter flights from the USA and presenting passengers as they left the aircraft with spades to help them search for the Golden Hare. The fever lasted for two years until in 1982, the Golden Hare was discovered by a still anonymous man.

These events set the stage for a series of copycat treasure hunts some of which caused serious environmental damage. Cadbury's Golden Egg hunt had to be called off because of adverse publicity and thereafter, it was widely accepted that in future any similar project would have to be of a nature which could not cause damage.

Haresoft's computer game version of the treasure hunt had two parts, Prelude and Finale and it was anticipated that it would take 18 months to two years to solve the puzzle. The prize for correct interpretation of the clues and pinpointing the location of the Golden Hare was a choice of the jewel or a cash prize of £30,000.

However, the software ws plaqued with problems and Haresoft went into liquidation. Dennis Cross, finding the Golden Hare as the chief asset of the company, decided to send it to Sotheby's for valuation and auction. 'It is an exceptional item to find in a company's possession in such a situated', he comments. 'Selling it at Sotheby's is clearly the best way to make the most of its rarity value'.

The Cross' Hare

COMPUNET SETS NEW RECORD

OVER 100 new programs were uploaded onto Compunet in the first week of September, setting a new record for the ever-busier network. They were among over 2,000 items put onto the net by members in its most hectic week yet.

The programs covered the CBM 64/128, Amiga and Atari ST, the three machines for which Compunet is currently available. They range from utilities and development software to demos, art, music and games.

Compunet claims to be "Europe's biggest and most original on-line library of free CBM software," with around a thousand CBM 64/128 programs on the net at any one time and over 350 for the Amiga.

Besides software, members also contribute hundreds of pages of reviews, information, features, news etc to the net each week.

Compunet recently had to take on extra mainframe capacity to cope with the ever-growing flood of input. While to help keep netters up to date, members have now started a service to monitor and review the new items which appear every few minutes.

Every Compunet member has the right and facilities to upload text or programs at will, through any of the net's 70+ local phone numbers in the UK and Eire.

Contact: 01-997 2591

Worms turned down

The future of write once optical disks — known as worms — looks less bright with the announcement by Philips & Du Pont Optical that it has an erasable optical disk ready for shipment.

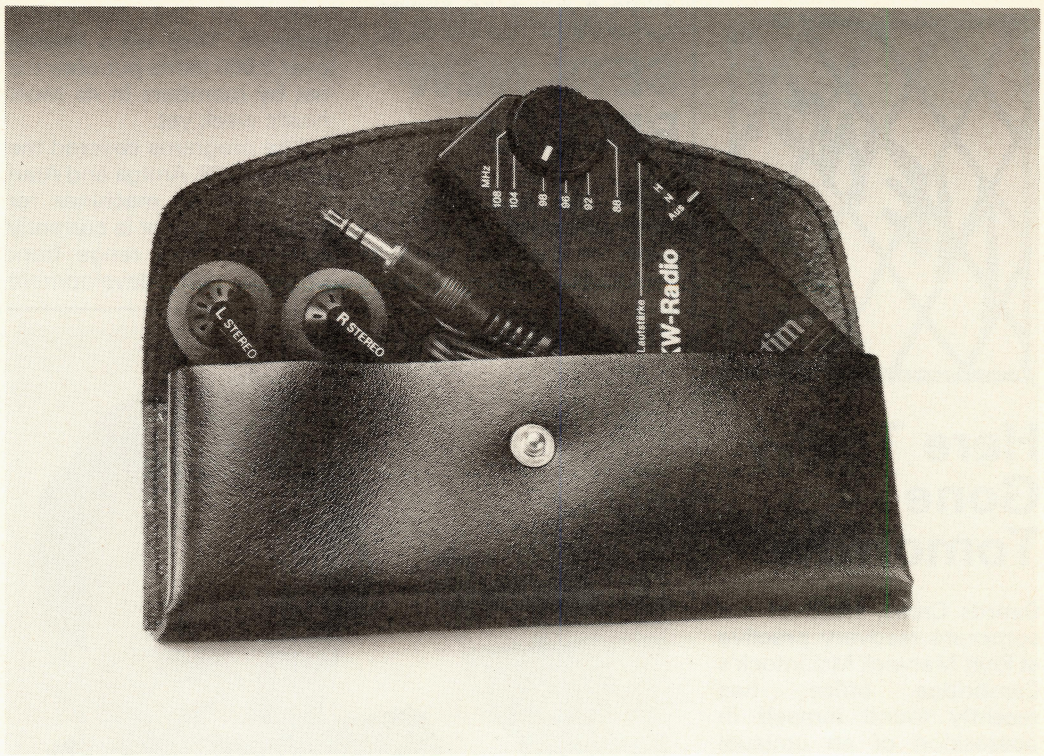
Philips & Du Pont said the erasable or re-writable 5¼-inch disk will be available in the US shortly and will be ready for Europe before the end of the year.

Anders Rehnberg, sales manager at Philips & Du Pont said that although 12-inch write once disks are safe for a couple of years, there is no future for 5¼-inch disks.

He said that there would be less demand for write once disks, which can only store information, now that erasable disks which can be rewritten, are available.

Other disk manufacturers are now racing to produce an erasable disk and Olivetti says that its research is nearing completion.

Verbatim = Radio



'personal' fm radio, designed to fit comfortably into the smallest pocket or handbag, is offered free by Verbatim with every five boxes of Datalife, Optima or Datalife Plus diskettes ordered from Action Computer Supplies. The radio is supplied complete with batteries, carrying case and headset.

Action has also reduced the prices of the Verbatim diskettes. The price of Datalife 5.25in, 48tpi, DS DD, diskettes is down from £11.50 to £10.95 per box of ten one-off, with the £100+ price down from £9.19 to £7.69 per box. In addition, every box of these diskettes is currently supplied with an eleventh diskette free of charge.

The Datalife 96tpi, DS HD, (1.2/1.6MB) diskette for the IBM PC.AT costs £20.50 per box of ten one-off, reduced to £17.60 for two boxes or more, and to £14.69 when included in any order over £100,000.

Contact: Action Computer Supplies, Abercorn Commercial Centre, Manor Farm Road, Wembley, Middx HAO 1WL. Tel: 0800 333 333.

Dig This!

As another digging season draws to a close, the staff and volunteers at Europe's largest archeological site are looking forward to a winter of computing with Commodore equipment.

The Helserton Project covers several acres of North Yorkshire moorland and was originally the site of both a Roman and Anglo-Saxon settlement. Today it plays host to dozens of professional and amateur archeologists and an impressive array of hi-technology.

The site's principal archeologist is Dominic Powlesland. Not content with being one of the UK's foremost experts in early-British history, he has also taught himself to design and develop a powerful computerised database of the site and its contents.

Originally developed on a Commodore PC60 (a 80386 clone), the site data base is gradually being transferred to an Amiga 2000 graphic workstation.

The original system presents the site as a 2D map. Using a mouse-driven interface, the user can define an area of interest and 'zoom-in' for a closer look. Every square inch of the site has been meticulously excevated, with every find carefully logged for position, depth, size etc. This allows the user to analyse the site both in detail and from a wider historical and geological perspective. However, the introduction of the Amiga has allowed the introduction a further element into the database — video stills and sequences. When complete, the user will be able to call up any find and along with detailed written information, be presented with its video recording.

It is hoped that the present Amiga prototype will be completed for the forthcoming Which Computer show. Possible further enhancements to the system include an educational interactive-video system.

Virgin Mastertronic

Virgin Communications has announced that following its acquisition of 45% of the Mastertronic Group in October last year it has now completed negotiations to obtain the balance of the equity of the Group and is forming a new company Virgin Mastertronic which will combine the computer and video game interests of both companies.

Virgin Mastertronic, retains all the management from both companies and with sales of over £30m per annum becomes one of the largest companies in the industry in the world.

Managing Director Nick Alexander said: "This is the fulfilment of well over a year's hard work. After our initial involvement in Mastertronic we found that our operations were highly complementary and this step makes tremendous sense for us both. We are now one of the strongest companies in the industry and we intend to use that benefit to the full."

Frank Herman Managing Director of Mastertronic and Deputy MD of the new company said "We began in this industry as innovators and we have continued to be so. Virgin Mastertronic is the only company to be active in all sectors of the industry from the arcades through to the home, from publishing to manufacturing and distribution, from full price to budget, as well as the games console market. We are delighted at this opportunity to work within Virgin which will give us the extra managerial and financial muscle to put our ambitious plans into effect."

The Company has Arcade machine software and hardware development (Arcadia), full price home computer software publishing (Virgin Games, Leisure Genius and Melbourne House), Budget home computer software publishing (Mastertronic, Ricochet, Bulldog, M.A.D.) and home software distribution in association with Entertainment UK Ltd (Entertainment Distribution).

STACK COMPUTER PRODUCTS

C64 C128 128D

NEW

- NEW HIGH ACCURACY DESIGN
- PRECISE COL/MONO DRAWINGS
- 10 GAMES + PICTURE PRINTING
- ARCHITECT & ELECTRONIC TEMPLATE
- DISC BASED

LIGHT PEN

- DRAW *ACCURATELY*
- SOFTWARE + 10 GAMES
- DISK
- PRINT PICTURES

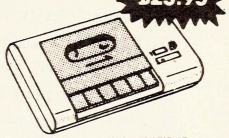
ARCHITECT & ELECTRONIC TEMPLATE

LEADS

•C64 - SCART	5.75
•C64 - FERGUSON TX	3.95
•C64 - AMIGA MON.	5.75
•C64 - SONY TV/MON	5.75
•C64 - PHILIPS TV	5.75
•C64 - 1701	6.75
•128 - 40/80 COL MONO	9.95
•128 - AMIGA/1901	7.75
•AMIGA - SCART	9.95
•AMIGA 500 PRTR.	5.95
•C64 DISK LEAD	4.75
•T.V. LEAD	1.75
•PRINTER SPLITTER	7.25
•RS232 - RS232	9.00
•USER PORT CENT.	12.00
•PET - IEEE	18.00
•IEEE - IEEE	18.00
•GENDER CHANGER	5.00

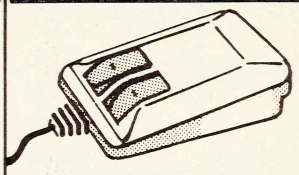
ALL CBM'S

DATASETTE £23.95



- 100% CBM COMPATIBLE
- COUNTER & PAUSE
- RECORD LIGHT
- C16/+4 ADAPTOR £2 EXTRA

C64 C128 128D

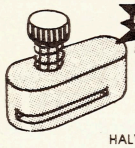


NEOS MOUSE & CHESS

- TAPE £29.95
- DISK £29.95

1540 1541 1550 1570

NOTCHER £3.95



HALVE DISK COSTS

- Use both sides on single sided drives

DISKS ETC.

• 10 SUPER QUALITY 5¼" IN PLASTIC CASE	£8.50
• 10 HIGH QUALITY 5¼" IN PLASTIC CASE	£7.50
• 10 SUPER QUALITY 3½" IN PLASTIC CASE	£14.00
100 CAP 5¼" LOCK BOX	£10.50
50 CAP 5¼" LOCK BOX	£9.50
40 CAP 3½" LOCK BOX	£9.00

ALL WITH RIGID INDEX SEPARATORS

C64 128's IN 64 MODE

- EXPERT WITH ROCKET. . £29.95
- FREEZE MACHINE. £28.95

CBM 64 CASSETTE ALIGNMENT KIT

£5.95

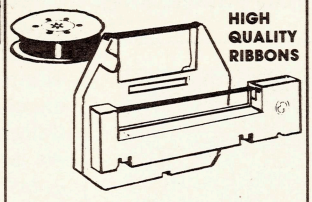
INCLUDING CLEANER, DEMAGNETIZER AND SCREWDRIVER

64

JET PACK TAPE BASED COMPILER

- PROGS RUN UP TO 25 TIMES FASTER
- 100% CBM COMPATIBLE

£10.00

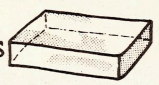


HIGH QUALITY RIBBONS

• MPS801	3.54
• MPS802	3.93
• MPS803	3.29
• 1525	3.35
• 1526	3.93
• DPS1101	3.52
• MPS1200	4.49
• MCS801	14.24
• MPS1500C black	21.88
• MPS1500C colour	22.22
•MX/FX/RX80	3.78
•MX/FX/RX100	4.32
•CITIZEN 120D	4.49
•STAR NL10	4.50
•STAR LC10	3.97
•STAR LC10 colour	8.28
•OKIMATE 20	7.76
•OKIMATE 292	10.96
•OKIMATE 293	14.35
•PANASONIC 1080/1	5.00
•SEIKOSHA GP80	2.60
•SEIKOSHA GP100	2.60

• WE STOCK ALL TYPES OF RIBBONS AND LASER PRINTER SUPPLIES

BS3120 *SAFETY DUSTCOVERS*



SAMPLE LIST
FROSTED • BLACK TRIMMED
ANTI-STATIC • FIRE RETARDENT

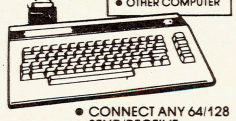
•64/20/16	1.75
•PLUS 4	2.75
•64C	2.00
•LO-LINE CASE	2.00
•128	3.50
•128D	4.50
•C2N/1530/1531	1.50
•1541/1370	3.00
•1571	3.00
•EXCELLERATOR	3.00
•AMIGA 500	4.00
•AMIGA 1000	6.00
•AMIGA 2000	6.00
•AMIGA 101 & DRIVE	2.50
•EVESHAM AMIGA DRIVE	2.50
•1084	6.00
•1701/1702	4.00
•1901M/1900C	6.00
•MPS801	3.00
•MPS802	3.00
•MPS803	4.00
•MPS1200/120D	4.50
•STAR LC10	4.50
•STAR NL10	5.00
•EPSON LX80/86	5.00
•MP135+	4.50

64 128 +4 VIC 20 128D

£19.95

FULL RS232 BI-DI INTERFACE

- TYPEWRITER
- PRINTER
- MODEM
- OTHER COMPUTER



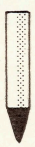
- CONNECT ANY 64/128
- SEND/RECEIVE

- SUPPORT SOFTWARE
- TERMINAL EMULATOR
- FILE TRANSFER
- CONVERT 4 TO 2

SUPPORTS:
RTS, CTS, DSR, DTR, DCD
TXD, RXD, TRUE OR
INVERTED SIGNALS

1520 PRINTER/PLOTTER

ROLLS £1.20 EACH



PACK OF 4 PENS
BLACK, RED, BLUE, GREEN.

£5.95

C64 128 128D

- SWITCHED CENTRONICS I/F

LEAD & SOFTWARE FOR PRINTER DRIVER. WORKS WITH EASYSCRIPT, TASWORD, MINI OFFICE II, VISA ETC

£18.00

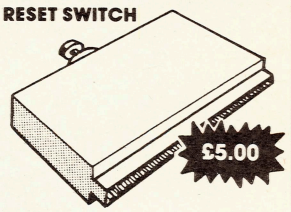
- **IEEE 488 I/F**

CARTRIDGE TO DRIVE PET PRINTERS AND DISKS. WORKS WITH EASYSCRIPT, VISA ETC.

£79.95

64 128 128D V20

RESET SWITCH



£5.00

RESET & POKE
USER PORT TYPE
- AND OVER 100 CHEATS

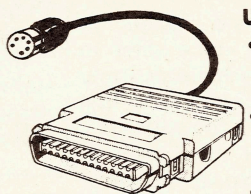
AMIGA

£79.95

USE DPS1101 ON IBM, AMSTRAD ETC.

AMIGA TO CBM
CENTRONICS/C64
INTERFACE INCLUDING
8K BUFFER
CENTRONICS IN/CBM
SERIAL OUT

C64 128 128D +4 C16 VIC 20



£39.95

UNIVERSAL CENTRONICS I/F

- USE ANY PARALLEL PRINTER ON ANY CBM HOME COMPUTER
- USES NO MEMORY OR SOFTWARE
- ALL TEXT & GRAPHICS
- COMPLETE WITH ALL LEADS & CONNECTORS
- 100% COMPATIBLE

8K BUFFERED VERSION **£49.95**

C64 128

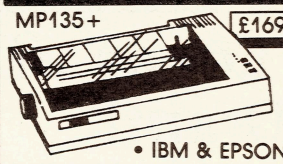
NEW SUPER HELP CARTRIDGE £10.00

- COMPACTOR
- ASSEM/DISK ASSEM
- MONITOR
- DOS SUPPORT
- 20 PROG, AID, COMMANDOS

- **BLITZ COMPILER £5**
- RUNS BASIC MUCH FASTER
- ACCEPTS EXTENSIONS
- SIMPLE OPERATION

PRINTER

MP135+ £169



- IBM & EPSON

- AMIGA COMPATIBLE TRUE CENTRONICS
- 135cps BI-DIRECTIONAL
- NLQ, FONTS, ITALICS etc
- FRICTION & TRACTOR
- 9 WIRE PRINT HEAD

- VIC IEEE CART. £9.95
- C16 RAM PACK. £29.95
- 4-SLOT (VIC). £2.95
- 3/16K RAM PACK (VIC). . . £34.95
- 3/16/32K RAM PACK (VIC)£49.95
- 64 POWER SUPPLY. £26.95
- C16 POWER SUPPLY. £22.00
- +4 POWER SUPPLY. £28.98
- 128 POWER SUPPLY. £75.00

PETS

- **CENTRONICS I/F**

use centronics printers on PET computers **£80.45**

- **RS232 I/F**

use RS232 printers on PET computers **£91.95**

Specify disk or PET edge connector on computer

MINI OFICE II

- GRAPHICS
- WORD PROCESSOR
- SPREAD SHEET
- DATA BASE
- COMMUNICATIONS
- LABEL PRINTER CBM 64/128
- CASS £16.75
- DISK £19.75

FREE CATALOGUE AVAILABLE ON REQUEST

PRICES INCLUDE VAT
P&P 90p U.K.
(FREE OVER £20)
OVERSEAS £3.00

MEEDMORE (Distribution) LIMITED
28 Farriers Way
Netherton
Merseyside L30 4XL
Tel: 051-521 2202

AS FROM 26/11/88 THESE PRICES SUPERCEDE PREVIOUS ADVERTISEMENTS

Action's Power Manager

Action's new Power Manager unit combines protection from voltage surges and radio frequency interference (RFI) with the facility to switch up to four peripherals on or off from the unit's control panel.

The Power Manager has four standard 3-pin (13 Amp-type) outlet sockets, allowing it to accommodate normal mains leads. The sockets can be switched on or off either individually or simultaneously from the front panel, and can supply between them a total of up to 3 Amps.

The unit's protection circuits filter out RFI, and dissipate both incoming and outgoing voltage surges ('spikes'), so providing protection against bothmains-borne surges and those generated by any of the peripherals in the system.

Made by Bowthorpe, a UK company with over 40 years' experience in the manufacture of high-performance protection equipment, the Power Manager is available from Action Computer Supplies at £90.00.

Action Computer Supplies, Abercorn Commercial Centre, Manor Farm Road, Wembley, Middx, HA0 1WL.

Konix navigate a new course

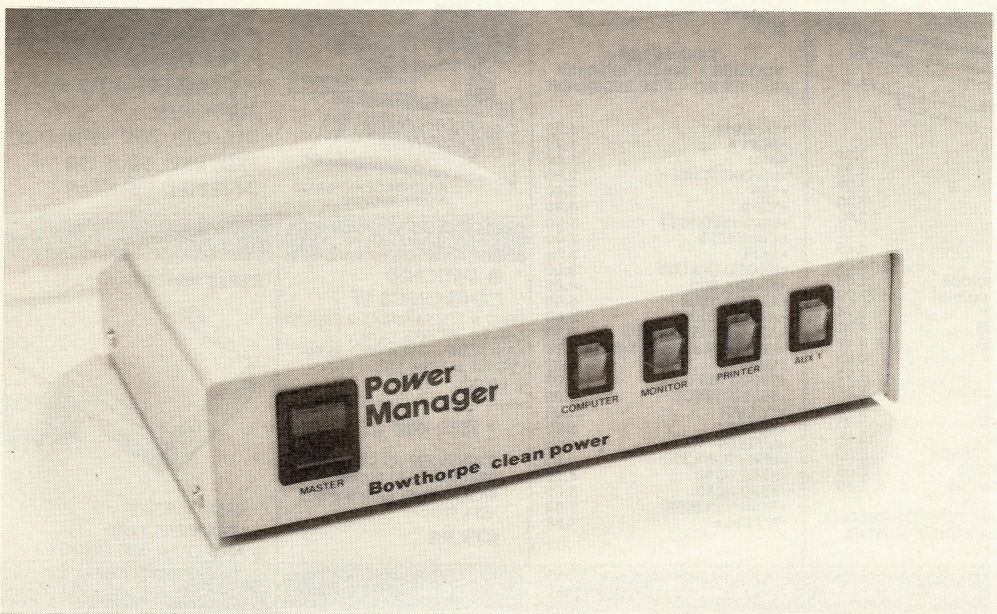
THE Konix Navigator joystick, which was first unveiled at the recent PC Show, will be available in November.

Konix believe the Navigator, is the best joystick they have ever produced. The Navigator was first conceived over 2 years ago and detailed designs were hiding in the Konix offices at the time of the last PCW Show. But before Konix released it they wanted to be sure it was right.

The interior design of the Navigator is similar to the workings of the Speed King. It is controlled by microswitches, it is say Konic "very robust and would pass any waggle test" highly responsive.

In feel it is likely to appeal to more people than the Speed King. It is ergonomically designed, with a pistol grip handle, so that it can be held in either the right or left hand. Konix have spent a lot of money researching the feel of the joystick so that they could be sure the final shape was the one the average person would feel most comfortable with. Commenting, Konix Director, Sandra Holloway, said: "The Speed King is a tough act to follow and we wanted to be sure that we excelled ourselves. We are delighted with the result and we are sure that everyone, apart from our rivals, will feel the same."

Price £14.99 and Compatability: Commodore 64, Vic 29, Amiga.



Miracles of Science

The University of St Andrews has come up with a computer that can read the entire Greek New Testament in only eight seconds.

The Ibycus Scholary Computer costs £5,000 — loads of pocket money.

It reads just Latin, Greek, Hebrew and Coptic at present, but other languages will also be programmed in.

'Loads of Dram!' says CBM

Commodore Business Machines now claims to hold approximately 40% of the world's independently produced memory chips (D-RAM) at a time when there is a damaging worldwide shortage. The dearth of D-RAM is creating supply problems for many of the computer industry's leading manufacturers. No D-RAM, now computers or at least, like Atari and Amstrad higher prices.

Commodore is keen to point out that no such supply problems are effecting its deliveries. Commodore initiates enough forward buying contracts every year to assure the supply of all components, including the vital memory chips. Where many computer companies are floundering to fulfil their orders, Commodore has a sound and regular supply of machines. Commodore is still building PCs and Amigas at a time when several other manufacturers are struggling to keep their plants turning over. Traditionally, the D-RAM market has swooped from shortage to glut with monotonous regularity. But the present shortage would appear to be more than just a glitch in the manufacturing/supply routes and looks set to last for another 12 months.

As long as the boom in Far Eastern clone manufacturing continues — together with the trend towards larger, more expensive memory chips — it would appear that some manufacturers will be breaking promises rather than sales records. However, Commodore say they won't be one of them.

Steve Franklin — the Managing Director of Commodore Business Machines — commented: "It concerns me that some of the so-called captains of our industry continue to launch new products and make new promises without having the ability to deliver. This is harmful not only for themselves but also for the industry as a whole. Difficulties — such as supply problems — highlight the true calibre of companies. In this case enhancing the strength an ability of large multi-national corporations, such as Commodore, in the long and short term, strategic and operational planning."

NEW

MICRO BLASTER

REPLAY® PROUDLY PRESENTS...

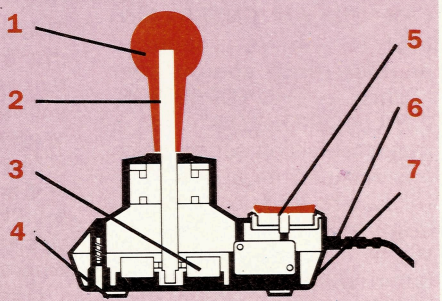
The New Microblaster Joystick, professional arcade quality, fully microswitched for the ultimate in game control.

ORDER TODAY AND TAKE CONTROL!

ONLY **£12.95** POST FREE

FEATURES INCLUDE

1. Ergonomically designed handle and base for smooth, accurate and comfortable playing action.
2. Steel shaft for extra strength & durability.
3. 8-way arcade quality microswitches giving greater sensitivity and precision controlled movement.



4. Non-slip rubber feet on base for secure table mounted operation.
5. Large, dual-fire microswitched fire buttons for left or right hand operation.
6. Extra long 1.4 metre cable allows more choice of player position.
7. Switchable normal/rapid fire options for extra player control and higher scores.

Suitable for use with a wide range of computers and video game machines.

Compumart Ltd., Jubilee Drive, Loughborough, Leics. LE11 OXS. Tel: (0509) 610444

Compumart are the Officially Appointed Sole UK Dealer for Replay Joysticks.

GUARANTEE
This quality Replay® joystick is fully guaranteed against material defect or faulty workmanship for a period of 12 months from the date of purchase.

ORDER TODAY AND TAKE CONTROL!

PLEASE RUSH ME ___ JOYSTICK(S) @£12.95 each.

Total enclosed £_____

Type of computer owned_____

Despatched same day. Allow maximum 7 days delivery.

Please deliver to:

Name_____ Date_____

Address_____

_____ Postcode_____

Price inc. VAT, free postage & packaging U.K. only subject to availability. E. & O.E.

Access VISA

(0509) 610444
24 HR HOTLINE
to order using ACCESS/VISA or complete the coupon and send with a cheque/ P.O. to:

COMPUMART LTD
DEPT. A.U.1.
FREEPOST
LOUGHBOROUGH
LE11 OBR

Commodore set to cause a stir with its new PC prices and configurations

Commodore Business Machines has announced 23 price changes and 13 new configurations for the entire 80286 (PC 40 III) and 80386 (PC 60) Computers.

The new prices say Commodore make her '286 and '386 machines more competitive than ever before. For instance, the PC 60 range now starts at £1799.00 (RRP) and tops-out at £3599.00 (RRP). The machines offer true 32 bit technology using fast 328-not 16-bit RAM. The PC 60 is also one of the most compatible computers around due to its Intel chips and mother-board. The entry level PC 40 comes with a VGA monochrome monitor as standard for £1299.00.

Andrew Cornish — Commodore's National Sales Manager for the Business Division — commented: "The new prices and configurations represent the end of Commodore's product alignment in the PC sector. It is a process we started four months ago and its completion makes our PC range very competitive on pricing, quality and flexibility.

All the PC 60 systems are available now from Commodore. The PC 40 III products will be available within six weeks.

Grandslam's Thunderbirds

GRANDSLAM ENTERTAINMENTS have secured another much sought after licence — THUNDERBIRDS. "THUNDERBIRDS" is a major television series which has retained its appeal over th eyears and is currently enjoying another revival. We're confident that the game will be as popular as the TV series itself," commented GRANDSLAM Managing Director, Stephen Hall.

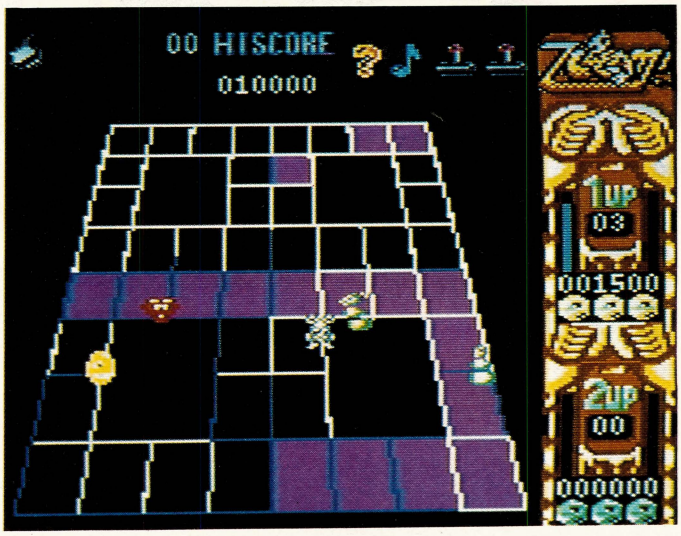
THUNDERBIRDS the game, joins the famous Tracey family in a four way scrolling role-playing graphic adventure. Whilst on a mission to rescue two trapped miners from the bottom of a lift shaft, their craft is filmed by the Hood, the infamous arch-enemy and evil destructor of noble causes. His cameras have managed to penetrate THUNDERBIRDS' film protection shield and made a video of the vehicles. If their anonymity is to be maintained, the Tracey family will need to retrieve and destroy the video. Situations are never that simple though, and whilst on their search for The Hood, the Tracey family encounter many emergency situations where their immediate help is required. One incident requires THUNDERBIRD 4 to drive to the bottom of the sea to rescue the crew of a nuclear submarine and ensure there is no risk to public health.

Meanwhile, Lady Penelope and her drive, Parker, are hot on The Hood's scent and close to finding out his secret whereabouts.

GRANDSLAM'S THUNDERBIRDS features all the famous characters from the TV show, including Virgil, Brains, Lady Penelope and Parker. The game will be available for all major formats in February 1989, and will be followed by further missions.

CCI EDITORIAL ASSISTANT

Would you like to work on CCI and other magazines? We have a position for an Editorial Assistant. No, we don't need another games reviewer. We want someone who is computer literate to a reasonable standard — probably who has used several machines and is 18 or over. S/he should live in or close to London, or be prepared to move to North London:
Antony Jacobson
Managing Editor, CCI, 40 Bowling Green Lane, London EC1R 0NE.



Discovery Zooms into 64

ANNAPOLIS MD — Discovery Software has announced the release of *ZOOM!*, the company's second arcade-style game, for the Commodore 64®/128™ computers. The game is currently available for the Amiga, and will be available for the IBM shortly.

"When we released *ZOOM!* for the Amiga, we were looking for a game that was fun for the whole family," Richard Ross, president of Discovery Software, said "*ZOOM!* synthesizes many of the fun factors found in arcade games in a way never done before. The response to the game on the Amiga has been terrific. People love it!"

The easy to learn, non-violent game features a character named ZOOMER, who is chased by a gang of reckless enemies through an outerspace land called ZOOMLAND. ZOOMER's mission is to dart through ZOOMLAND, capturing territories and collecting points. Designed to appeal to video game enthusiasts at all skill levels, *ZOOM!* challenges players' reflexes and strategic thinking abilities. The game has 50-levels of play for one or two players. According to Andy Hook, the programmer who adapted *ZOOM!* for the Commodore 64, the game duplicates the same arcade realism found in the Amiga version. "*ZOOM!* showcases the full graphic and sound potential of the Commodore. The result is a game that is equally fun to watch as it is to play."

E.A. Role Playing for PC

Electronic Arts has announced the release of two role-playing titles for the IBM and PC compatibles, Sentinel Worlds 1: Future Magic and Wasteland.

Sentinel Worlds I: Future Magic is a science-fiction role-playing game that E.A. believes will create the same sensation among IBM users as Starflight did when it was introduced in 1986. They say "Starflight showed that characters in a fantasy game could be as rich as characters in a novel and this is even more true in Sentinel Worlds. The program is graphically stunning with smooth animation. The sound track and special effects enhance the action."

Sentinel Worlds takes players to a 3-planet system that is constantly harassed by raiders from an unknown source. As players explore locations on starships and planets, the screen displays a map of the area being explored. The screen allows players to witness a first-person view of the terrain, one of the 85 animated character pictures, motion and radar scanner data and information on weapons, communications or combat. Price £24.95.

DIMENSION computers l.t.d.

40/50 High Street
Leicester LE1 5YN
Tel: (0533)
517479/21874

THE MIDLAND'S LARGEST COMPUTER STORE

AMIGA RANGE

AMIGA B2000 PACK
Amiga B2000 Computer, Commodore 1084 Monitor, PC/XT Bridgeboard, 20Mb Hard Disc ..... **£1,399.00 + VAT**

AMIGA A500 PACK 1
with Mouse, Workbench, Basic and TV Modulator **£359.00**

AMIGA A500 PACK 2
with Mouse, Workbench, Basic, TV Modulator, Formula 1, Footman, Viper, Mousetrap and Plutos **£379.00**

AMIGA A500 PACK 3
with Mouse, Workbench, Basic, Photon Paint, plus SUPERBASE Database **£399.00**

AMIGA A500 plus PHILLIPS 8833 STEREO MONITOR **£569.00**

AMIGA A500 plus COMMODORE 1084 MONITOR **£569.00**

Amiga B2000 Computer **£829.00**
Commodore 1084 Colour Monitor **£224.95**
Phillips 8833 Colour Monitor **£224.95**
AF880 1Mb A500 3.5" External Drive **£89.95**
Cumana 1Mb A500 3.5" External Drive **£99.95**
Amiga Power Supply Unit **£59.95**
Internal A2000 2nd Drive **£79.95**
Amiga Midi Interface **£34.95**
Digiview Colour Digitiser **£139.95**
Supra 30Mb A500 Hard Disc **£699.00**
2Mb Internal RAM Expansion **£449.00**
PAL Genlock A500/A2000 ..... **£219.95**
A500 512K RAM Upgrade **£129.95**
Future Sound Digitiser, including microphone **£169.95**

STAR LC10 COLOUR DOT MATRIX
* 120 cps Draft, 30 cps NLQ
* 6 Resident Fonts and 6 Print Pitches
* Draft and NLQ in all Fonts and Colours
* 7 Colours plus Multiple Shade Graphics

Includes AMIGA Printer Lead **£249.95**

PHOTON PAINT
The AMIGA's most powerful graphics pack **£69.95**

AMIGA SUPERBASE PERSONAL DATABASE
* Extremely powerful yet easy to use
* Flexible File Structure and Definition
* Powerful Report Generator
* Over 150,000 users ..... ~~£59.95~~ **£39.95**

CBM64 YAMAHA PACK
Commodore 64, C2N Data Recorder, 35 Games Pack, Bush Walkman plus YAMAHA SHS10 MIDI COMPATIBLE KEYBOARD **£199.95**

PRINTLINK
Allows AMIGA to use CBM Serial or Standard Centronics Printers, with the Bonus of a 60K Buffer.
CBM Serial only **£34.95**
CBM Serial plus User Port to Centronics **£44.95**

STAR LC10 DOT MATRIX PRINTER
* 120 cps Draft, 30 cps NLQ
* Friction and Tractor Feed
* Paper Parking Facility
* 6 Resident Fonts and 6 Different Print Pitches

Selectable from Front Mode Select Panel
Commodore Serial or Centronics **£214.95**
Commodore 64/128 Colour Version **£249.95**
Including FREE GEOS worth £26.95 with CBM version

THE NEW 1541 II DISC DRIVE **£169.95**
OCEANIC OC 118N **£129.95**
Commodore Compatible Disc Drive
Both include GEOS, plus:
Software Pack
6 Disc Adventure Games plus 5 Disc Arcade Games

SUPER G
CBM to Centronics Printer Interface **£34.95**
FINAL CARTRIDGE 3 ..... **£39.95**
MPS 803 TRACTOR FEED UNIT **£29.95**
CBM64 256K UPGRADE **£129.95**
COMPOSER/EDITOR SOFTWARE
For Music Expansion System, Tape or Disc **£24.95**
ACTION REPLAY Mk IV PRO
Tape to Disc Back-up Cartridge **£34.95**
NEOS MOUSE
With CHEESE Software, Tape or Disc **£24.95**
COMMODORE C2N DATA RECORDER **£29.95**

CBM 64 OLYMPIC PACK
Commodore 64, C2N Data Recorder, Quickshot 2 Joystick, 10 Sports Game plus 30 Arcade Games **£149.95**

PRINTER RIBBON OFFER
MPS 801, 802, Citizen 120D and Star NL10 Ribbons **£5.95**
MPS 803 & MPS 1000 ..... **£4.95**
DPS 1101 Multi Strike **£3.50**
BUY FOUR AND GET ONE FREE!

LIMITED OFFER
COMMODORE 1581 3.5" DISC DRIVE ~~£199.95~~ **£139.95**

REMARKABLE COMMODORE PC1 OFFER
Unbeatably priced PC/XT compatible, including extremely compact base unit, detachable keyboard and monitor. Compatible with all major PC/XT software, the PC1 now represents the lowest price for specification PC compatible in the UK.
* 8088/4.77MHz Processor
* 512K RAM
* Serial and Parallel Ports
* MSDOS 3.2 and GW Basic included

For a limited period, the PC1 also includes ABLE ONE Integrated Spreadsheet, Wordprocessor and Database package (usual price £113.00)
PC1 with Mono Monitor ..... **£299.99 + VAT**
PC1 with CGA Colour Monitor ..... **£449.00 + VAT**
PC1 Package without Monitor. Compatible with CBM 1084 and most CGA/Hercules monitors ..... **£269.00 + VAT**

CITIZEN 120D DOT MATRIX PRINTER
Commodore version (with 64/128 Printer Lead) **£139.95**
Centronics version (with AMIGA Printer Lead) **£139.95**
Commodore 1901 Colour Monitor **£219.95**
Philips 64/128 Green Screen Monitor **£89.95**
MPS 1200P Dot Matrix Printer, Centronics **£219.95**
MPS 1500C 7 Colour Dot Matrix, Centronics **£339.95**
1581 3½" Disc Drive including 10 x 3½" Discs **£199.95**

CBM64 HOLLYWOOD PACK
Commodore 64, C2N Data Recorder, Quickshot 2 Joystick, 5 Hollywood Games, 5 TV Quiz Games, plus 30 Arcade Games **£149.95**

PRECISION
Superscript 64 ..... **£24.95**
Superbase 64 ..... **£24.95**
Superscript 64 & Superbase 64 ..... **£44.95**
Superscript 128 ..... **£29.95**
Superbase 128 ..... **£29.95**
Superscript 128 & Superbase 128 ..... **£54.95**
Superbase, The Book **£11.95**

GEOS Version 1.3
CBM 64/128 Operating System
Including: Desktop, Geowrite, Geopaint, and Desk Accessories, Disc
CBM64 ..... **£26.95**
CBM128 ..... **£34.95**

GEODEX/DESKPACK
Combined Database with powerful Mailmerge function. Also contains Artgrabber Graphic Images, Calendar and Icon Editor **£21.95**
GEOCALC Spreadsheet **£24.95**
GEOCALC 128 ..... **£34.95**
GEOPUBLISH Desktop Publisher **£34.95**
WRITERS WORKSHOP **£21.95**
WRITERS WORKSHOP 128 ..... **£34.95**
FONT PACK 1 ..... **£16.95**
GEOFILE Database **£24.95**
GEOFILE 128 ..... **£34.95**
GEOSPELL Spellcheker **£16.95**
I CONTROLLER*
Geos-compatible Joystick. Fits onto keyboard **£12.95**
*FREE OF CHARGE WITH PURCHASES OF TWO OR MORE GEOS PACKAGES

CBM 64/128 and PLUS 4 COMPANIES PACK
Sales/Purchase/Nominal Ledgers with Invoicing and Stock Control, Disc **£24.95**

PERSONAL CALLERS AND EXPORT ENQUIRIES WELCOME
ALL OFFERS STRICTLY SUBJECT TO AVAILABILITY
ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE
ALL PRICES INCLUDE VAT UNLESS OTHERWISE STATED

To order, either send cheque/P.O. with coupon or ring **(0533) 517479/21874** with Access/Barclaycard number. Please allow 7 working days for delivery from receipt of order or cheque clearance.
Please add £1.00 towards carriage and packing on any software order.
Hardware orders add £1.00 under £65.00 value, and £5.00 over £65.00 value.
Printer orders add £5.00 towards carriage.

Send to: Dept. No. CCI 11, Dimension Computers Ltd., 40/50 High Street, Leicester LE1 5YN.
Tel: (0533) 517479/21874 Fax: (0533) 511638

Item	Quantity	Price
	Total	

Name.....
Address.....
.....
Telephone:.....

NEW FROM TRILOGIC

BACK-UP AND TRANSFER PROGRAMS

FROM DISK TO TAPE TAPE TO DISK
DISK TO DISK TAPE TO TAPE

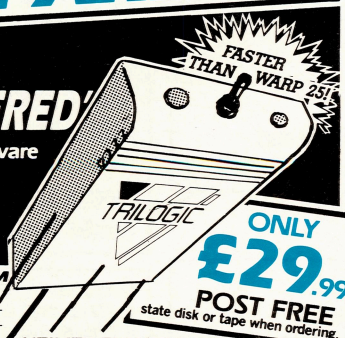
LAUNCH AHEAD!

WITH THE NEW

'ROCKET POWERED'

Including V3.2R Software

Expert CARTRIDGE



ONLY £29.99 POST FREE
state disk or tape when ordering.

COMPLETE BACK-UP SYSTEM
MAIN FUNCTIONS

- Freezes all Programs.
- Creates a back-up onto Disk or Tape. Regardless of whether the original was loaded from Disk or Tape.
- Independent tests show the Expert to have the most effective compactor so you can save more games per Disk and have faster reloading.
- Saves a back-up in one file.
- Expert is not needed for reloading a back-up
- Programs reload in less than 10 seconds using New Rocket Loader.

UTILITY FUNCTIONS

- Sprite Saver & Editor with 'Animator'.
- Infinite Lives Command
- Joystick Autofire mode — even better than Autofire Joysticks
- Joystick Port Swap — Your back-ups can use the same port.
- Powerful & Professional 64k M/Code Monitor
- Printout Hires & Lores Screens.
- Expert Express — Use the Expert as a Disk Turbo Loader.

ROCKET — A SUPER-FAST DISK TURBO LOADER

- Loads independently of the Cartridge.
- Reload on average back-up in 6 seconds.
- Loads any size of file. • One file format.

COMPUTER PROBLEMS? CALL A DOCTOR!

64 DOCTOR

A professional diagnostic CARTRIDGE for your C64.

COMPRISES, 64 DOCTOR CARTRIDGE, USER & SERIAL PORT TESTERS, AND – **FREE** — *The only comprehensive fault diagnosis and Repair Guide available.*

TESTS: £18.99

- Keyboard
- Joystick Port
- Serial Port
- User Port
- Cartridge Port
- Basic Rom
- Kernal Rom
- CIA Chips
- Video Chip & Video Banks
- Sound Chip
- NMI & IRO Interrupts
- Cassette Key Press
- Cassette Data
- Even tests your Joystick.

- Explains step by step, how to locate faults and identify chips.
- How to dismantle the keyboard.
- Includes Commodore part number guide.
- Full of tips and hints many known only to the trade.
- How to desolder chips the professional way.
- Written by professionals with a vast knowledge of 64 faults and repairs.

LOADING PROBLEMS?

DATASETTE DOCTOR £8.99

THE ONLY COMPLETE DATASETTE SERVICE & ALIGNMENT KIT.

- Check and adjust alignment — Two Tests with very precise adjustment.
- Check Datasette Circuitry — Shows up electronic faults
- Check for Electrical Interference — Shows up noise from TV's & main wiring.
- Check Saving Performance — Special high Baud rate saving test.
- Check Loading Performance — Special Turbo loading test.
- Clean & Demagnetise Tape Head. — Cleaner/Demagnetiser supplied.

DRIVE DOCTOR £14.99

With this complete kit you can check:-

- HEAD ALIGNMENT — Unique test makes accurate setting easy.
- HEAD MOVEMENT - Shows up wear and friction.
- BACK-STOP SETTING -Critical but easy to adjust.
- MOTOR SPEED — Show speed errors.
- ALSO shows up free play & faulty S/motor.

COMES COMPLETE WITH PROGRAMME TAPE, SPECIAL ALIGNMENT DISK AND FULL INSTRUCTIONS.

ALL 3 DOCTORS ARE HIGH PERFORMANCE, ORIGINAL TRILOGIC PRODUCTS OUTPERFORM SIMILAR RIVAL PRODUCTS OFTEN COSTING MUCH MORE.

BARGAINS ON DISKS, BOXES, JOYSTICKS, DUSTCOVERS ETC.

DISK BOX FOR 50 51/4" DISKS, LOCKABLE	£8.99
DISK BOX FOR 100 5/14" DISKS, LOCKABLE	£10.99
DISK NOTCHER — USE BOTH SIDES OF D/SIDED DISKS	£4.99
51/4" DS/DD DISKS PACKS OF 10 WITH LABELS	£6.75
51/4" DS/DD DISKS SEALED PACKS OF 25 WITH LABELS	£14.99
QUICKSHOT MK 2 JOYSTICK WITH AUTOFIRE	£8.99
QUICKSHOT 2 TURBO JOYSTICK — FAST ACTION MICROSWITCH TYPE WITH AUTOFIRE	£13.49
JOYSTICK 3m EXTENSION LEAD	£3.99
C64/C64C DUST COVER *(STATE WHICH)*	£3.49
C128/128D DUST COVER *(STATE WHICH)*	£4.99
1541/1571 DUST COVER *(STATE WHICH)*	£4.99
1701/1901 DUST COVER *(STATE WHICH)*	£6.99
MPS801/MPS803 DUST COVER *(STATE WHICH)*	£5.99
CBM COMPATIBLE DATARECORDER	£17.99
DCL1 BACK-UP BOARD FOR 2 DATARECORDERS	£7.99
C15 DATACASSETTES. PACKS OF 5	£3.75
TITAN HEAVY DUTY C64 POWER UNITS	£31.95
TITAN POWER UNIT WITH SUPPRESSORS	£39.95
4 WAY 3m EXTENSION LEAD WITH SPIKE SUPPRESSORS	£8.99

SHOWROOM NOW OPEN!

FREE CATALOGUE WITH EVERY ORDER!

TRILOGIC

Trilogic, Dept. C.C.I. Unit 1
253 New Works Road
Bradford BD12 0QP
Tel - 0274 - 691115

BARCLAYCARD VISA

Fax 0274 - 600150

FAST MAIL ORDER SERVICE. PROMPT DESPATCH. ALL PRICES FULLY INCLUSIVE PLUS 10 DAY MONEY BACK GUARANTEE ON ALL ITEMS. PAYMENT BY CASH, CHEQUES PAYABLE TO TRILOGIC BY POSTAL ORDER, ACCESS OR VISA. ADD £1 EXTRA FOR EXPORT ORDERS, PAYMENT IN STERLING ONLY PLEASE.

EXPRESS DELIVERY £1.95

...news...news

Citizen WWF Leads School Datachase

Following the success of last year's Citizen sponsored World Wide Fund for Nature project, 'Pictures from Numbers', Citizen Europe is announcing a new project for schools called 'Datachase'. Each of the 36,000 targeted schools in the UK will receive details of the project. The project has three objectives: to encourage young people to identify, investigate and learn about environmental issues which are important to them; to help students develop presentation and creative skills through the use of computers and to demonstrate how problems can often be most successfully solved as a result of collaborative effort.

Robin Marriott, European Marketing Manager for Citizen Europe Ltd. said: "When we launched the 'Pictures from Numbers' project last year we received over 1,200 applications. We decided to go back to some of these schools to try and establish the extent of their computer facilities to gain an insight into existing attitudes towards using computing equipment.

"The results astounded us. There is still an overall shortage of computer equipment in schools and a vita gap in time put aside for training of teachers and children alike. Many teachers are not comfortable with computer technology themselves and the difficulty of access to equipment compounds the situation. This inevitably means that computers are not widely exploited in schools for problem solving and creative presentation as they are elsewhere in business and industry.

The 'Datachase' project will run until May 1989 (closing date 26th May 1989) and winners will be announced in July 1989. Citizen Europe Limited will not only be sponsoring this project but also giving prizes which will go some way to increasing the prize winners' access to high quality computer and printing equipment.

For further information about the 'Datachase' project or to receive project packs, teachers or pupils should write to: Education Department, WWF United Kingdom, Panda House, Weyside Park, Catteshall Lane, Godalming, Surrey GU7 1XR.

Display of the winning project entires for the "Pictures from Numbers" competition, which illustrates the pupils' achievements in creative computing.

SUPER CHIPS

Mike Hutchinson replaces his chips with a super version that commands respect. . . .

I am fascinated by mysteries and avidly read the skeptical literature. Does the Bermuda Triangle exist? No! Are we being visited by extra-terrestrials? No! Can Uri Geller bend metal using psychic powers? No! Why did Commodore leave out some important commands on the 128? I don't know! Well, not all mysteries are easy to explain, and *The Skeptical Inquirer* won't give me the answer to that one. so, how to overcome the problem of not having commands like find, change 'this' to 'that', and program append.

Free Spirit Software have produced an answer by some replacement chips to give you these commands, plus others, plus a screen editor. There are at least two combinations of chips available, depending upon the 128 computer which you have. (Yes, there are differences). I have a later model 128D, with a metal case, and power switch at the rear. The earlier model had a carrying handle and an interior fan.

The 'new' 128D needs only two chips, one less than the old one. They are fairly easy to fit after you realise that the cover should be slid backwards before being lifted off. The chips to be replaced are easily identified by the instructions supplied. The warning to handle the chips with caution as static charges can destroy them is a little worrying. The old chips have to be removed very carefully, which isn't easy to do with the limited space with which to grip them. Be careful not to bend the pins when the chip suddenly becomes free; you might need the old chips again! Be sure to note where each has to be replaced, for there is nothing to tell you if you get them mixed-up.

After I fitted the chips I decided to try the computer before replacing the cover. This was just as well, for they didn't work first time. The disk drive didn't spin and the monitor screen was blank. The old chips were replaced, and everything was OK. I put the Super Chips in again, and this time they worked.

The first difference with the Super Chips is the change to the cold start which credits Free Spirit Software and its programmers. But more important, the screen display defaults to lower-case characters. This means that you will possible have to change all your basic programs with 'Print Chr$(142)' at the beginning so that they run in upper-case. A small trouble perhaps, but a problem arises when you are writing a program for use on another Commodore computer. You have to remember how the screen will appear, especially if you are using graphics. The Commodore Dos Shell program runs in lower-case, which at first is a bit off-putting. But before condemning Super Chips because of this niggly problem, what about its advantages? These are considerable. Any professional or keen amateur programmer will find the additional commands useful.

Find works more or less as you would expect. To find all uses of string A$ you enter 'find.A$.'. This gives a screen print of all lines using A$. Instead of using full stops you can use any character not included in the item you want to find; any character except 'space' that is. You can also limit the search to any part of the program by using a hyphen, just as you would when listing or deleting part of a program. e.g. 'find.A$.-1000' limits the search to the first thousand lines. If the item to be found contains shifted characters you will have to use quote marks instead of full stops (or whatever choice you make).

Change works similarly to Find. To change A$ to B$ you enter 'change.A$. to.B$', again using a hyphen to limit the part the program you want to be affected by the change. A bug seems

cont. on next page

continued from page 21

SUPER CHIPS

to have taken-up residence in the chips though. I entered 'change''stock ''to''Stock'' ' and discovered that the Rems were not changed properly. Instead of 'Stock' they showed 'err$stock'. I found it difficult to remove the error. Overtyping made no difference. Even changing the line number didn't have any affect. Finally I deleted the line and re-entered it.

Combine is the command to add a program from disk to one in memory. There is a warning in the instructions to have the line numbers ordered correctly to avoid strange results, but I haven't yet found this a problem. I added a program with lower line numbers to the one in memory and renumbered the new combined program without difficulty.

Merge can be used to 'shuffle' one program into another. This means that if the programs have the same line numbers the second program to be loaded will replace those already in memory. I would expect to use this very rarely as it is obviously necessary to be sure that line numbers you want are not going to be overwritten. Quite a problem with two long programs.

'Start' gives the starting address for a program in decimal and hex; 'file' also gives the length and ending address.

'*' sends any monitor command to the printer.

How often have you wished you could do a screen print? Well, with Super Chips you can. Just enter 'restore' followed by 'D' and you get a low res screen dump. I use an Epson FX-80 with the line feed switched off. I was surprised that the print-out included line feeds. Fine for me, but if you have your printer line feed switched on your screen dump will probably have double line feeds.

'Unnew' performs the miracle of bringing back to life a newed program whether it has been erased by the 'new' command or by a reset.

A really useful command and one which I know I will use more than many of the others is 'type' which lists to screen a program you have on disk without affecting a program in memory. This can be used when you want to check lines in another program. Such lines can even be

'captured' by pausing the screen list and pressing 'return' having entering new line numbers if required. 'Type' will handle files other than program files should you wish. In practical use you can load the directory, move the cursor to the file to be loaded and press F5 (which, like other function keys has been re-defined) to enter 'type' plus a colon.

Other changes to the function keys are the following: **F1** and **F2** are now DLOAD and BLOAD plus a colon. Just list the directory (using **F3** as usual) and place the cursor on the program to be loaded. Pressing **F1** or **F2** loads the desired program.

F3 loads the directory on the left of the screen as usual. **F4** will load the directory of a second disc drive on the right hand of the screen in 80 column mode. Because of the presence of the second of these commands the first can look messy on screen. If you have a fully used screen when you press **F3**, only the left hand side of the screen clears to list the directory. This is of course in case you have the other directory listed on the right hand side.

F5 reports the last disk error.

F7 is still used to list a program, and **F8** has been changed to allow entry to the monitor.

Finally I come to the screen editor. This enables you (on the command 'editor') to draw a design on screen using characters or graphics and make a basic program for inclusion in your own programs. It can be used in a variety of cases, for designing anything from a menu to a logo. I used it to design the logo shown here. The dog was still difficult to do, but SHENLYN KARL was fairly easy. The program to produce this screen print is thirteen blocks long, so you will realise how long it would take to program line by line. I cannot say how long I took to do it using Super Chips as it is not the first version. I am sure that it saved me a lot of time and undoubtedly produced a far better result than I would otherwise have achieved.

Once you overcome the use of lower-case characters, Super Chips give you some invaluable commands. I wouldn't want to be without them. As I am always changing (improving?) programs which I use for business and personal use I think I have got value for money. Whether you too can justify the £29.95 which Super Chips cost, only you can say.

Now, if only someone would come up with a chip which will enable windows to be defined in different colours. . . .

M.H.

Contact: Financial Systems Software Ltd., 18 High Street, Pershore, Worcester WR10 1BG. Tel: 0386 553153. Price: £29.95

Evesham Micros

All prices include VAT/delivery

PRINTERS

All prices include VAT delivery & cable

LC10

Hugely successful 9 pin printer, the Star LC10 provides 4 NLQ fonts (with 96 print combinations) at 36cps and 144cps draft. Has a large 4K buffer and IBM/parallel interface buiilt in, includes a comprehensive front panel operation and features paper parking, allowing single sheets to be used without removing tractor paper.

Only £219.00

Colour version also available, Only £269.00

Prices include 2 extra black ribbons free of charge.

STAR PRICE RISE

Due to EEC levy Star have raised their prices as from 1st September. Our prices reflect this change. Please remember this when comparing prices.

Star SF-10DJ cut sheet feeder for LC-10	£64.95
Star LC24-10 feature-packed multifont 24pin printer	£339.00
Star NB24-10 24 pin printer 216/72 cps, including cut sheet feeder and 2 extra ribbons	£499.00
Star Laserprinter 8 high specification 8ppm / 300dpi laser, (price inc. 1 year on site maintenance)	£1795.00
Panasonic KXP1081 reliable 9pin 10" printer 120/24 cps	£169.00
NEC P2200 budget 24 pin 168/56cps	£319.00
NEC cut sheet feeder for P2200 printer	£69.00
Citizen 120D budget 9pin 10" 120cps	£139.00
Citizen LSP-100 budget 150/30cps 10" carriage	£169.00

SPECIAL OFFER AMIGA PACK

Our new special offer pack includes the following:

- ★ Amiga 500 computer
- ★ TV Modulator
- ★ Mouse & Mouse mat
- ★ Joystick
- ★ Photon
- ★ Karate Kid II
- ★ Sky Fighter
- ★ Grid Start
- ★ Demolition
- ★ Quiz Am
- ★ Black Shadow
- ★ Las Vegas
- ★ *plus* 5 disks of public domain s/ware

The total retail value of extras supplied is £270.45.

All this for only £399.00!

Pye 1022 TV/Monitor excellent medium res. picture, with full remote control as well. Lead supplied, next day delivery	£199.00
Philips CM8833 colour monitor suitable for Amiga 500	£259.00
Philips CM8852 monitor as above, but higher resolution	£299.00
Philips TV Tuner AV7300, use with any composite monitors	£79.00
Word Perfect	£149.95
Superbase Personal	£69.00
Superbase Professional	£179.95
Logistix	£79.95
Amiga 500 Dust Cover, protect your computer	£4.95

AMIGOS low price hard disks

'Amigos' good value hard disks now available, incorporating ever-reliable Seagate mechanisms with an average access time of 65ms for 21Mb and 30Mb, and 40ms for 40Mb and 60Mb versions. Including cooling fans, they are smartly and sturdily cased in beige, colour matched to your Amiga. They are even strong enough to stand your monitor on top. Software included.

21 MEG £399.00
30 MEG £469.00
40 MEG £549.00
60 MEG £649.00

Cumana 5.25" External Floppy Disk Drives

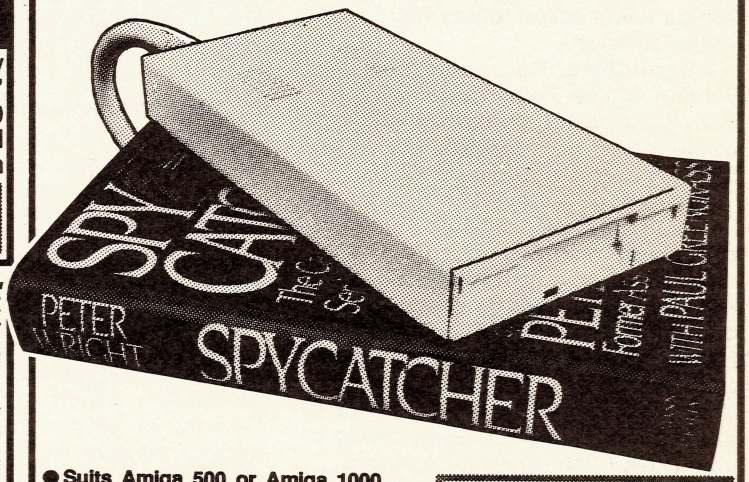
(model CAS 1000 S)

We are now supplying whisper quiet slimline 5.25" floppy drives for the Amiga user from Cumana. The 'Transformer' compatible drive features an integral power supply, 40/80 track switching, 360/720K formatted storage capacity and throughport connector. It also has an on/off switch which effectively unplugs the drive from the Amiga when it is not required.

Only £159.95

3.5" EXTERNAL DRIVES

using Citizen drive mechanisms



- Suits Amiga 500 or Amiga 1000
- Top quality Citizen drive mechanism
- On / Off switch on rear of drive
- Throughport connector
- One megabyte unformatted capacity
- Slimline design
- Very quiet
- Long cable for location either side of computer
- Full 12 months guarantee

Ultra low price!

£89.95

inc.VAT and delivery

Project D

disk backup utility

Only £34.95 inc.VAT/delivery

Probably the best and most complete 3.5" disk copier for the Amiga user. Can even copy MS-DOS, Atari ST, CP/M, Xenix and Archimedes disks. Because of the high specification of the Amiga drive, this copier is probably the best for the Archimedes or ST. Also includes track editor. Updates will be available in the future as and when new software protection schemes arise.

3.5" Disks

10 Bulk packed DS/DD 3.5" disks with labels, fully guaranteed	£11.95
25 bulk disks as above	£27.95
10 disks as above with plastic case	£13.95
25 disks as above, with 40 capacity lockable storage unit	£34.95
Verbatim DS/DD disks, top quality media with lifetime guarantee. Box of 10 only	£19.95
SKC MF2DD DS/DD 3.5" disks. Box of 10	£17.95

How to order from Evesham Micros

VISA

Phone us with your ACCESS or VISA card details on : ☎ 0386-765500

All prices include VAT and delivery. Next day delivery £5.00 extra.

Send cheque, Postal Order or ACCESS/VISA card details

Govt., educ. & PLC orders welcome
Same day despatch whenever possible
All goods subject to availability, E.&O.E.
Open to callers 6 days, 9.30-5.30

Evesham Micros Ltd
63 BRIDGE STREET
EVESHAM
WORCS WR11 4SF
✆ 0386-765500
fax 0386-765354
telex 333294

Also at: 1762 Pershore Rd., Cotteridge, Birmingham B30 3BH Tel: 021 458 4564

Joining Compunet

Compunet was the very first on-line service I accessed. Having obtained my shiny new Compunet modem I wasn't exactly sure what I would find on logging in. However, I needn't have worried, the on-line community is a friendly one and new users can always find a friendly soul to help them out.

Commodore C64 owners will need to get hold of a Compunet modem, which plugs into the cartridge slot and a nearby telephone socket. The modem is available directly from Compunet at £40 and includes one months subscription to the Net. The latest models use better tolerance components than previous versions and are more resilient to the noise on bad lines.

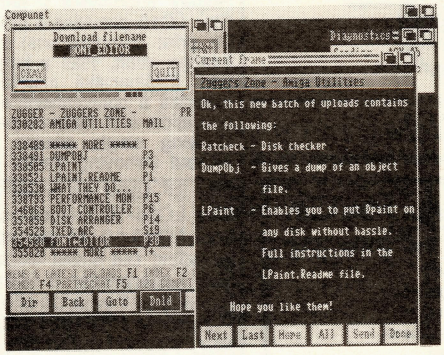
Amiga owners need one of the common V23 modems (Pace Linnet, Miracle WS4000 or Astracom 1000) and the Amiga Compunet Terminal software. The software is available from most public domain software sources at a cost of few pounds. The software is shareware and should be distributed at the cost of reproduction and postage. Only when they have tried out and joined Compunet are Amiga users asked to pay £20 for use of the software.

Alternatively Compunet supply a version of the Pace Linnet complete with Compunet software, suitable cable and one month's access to Compunet for £135 plus VAT.

In the case of the C64 modem the terminal software is stored in ROM in the modem itself. Both versions consist of a sophisticated online terminal that uses a special error-correcting protocol to ensure corruption-free screens of data are transmitted to and from Compunet. They also contain a screen editor to allow the construction and viewing of colour character graphics screens.

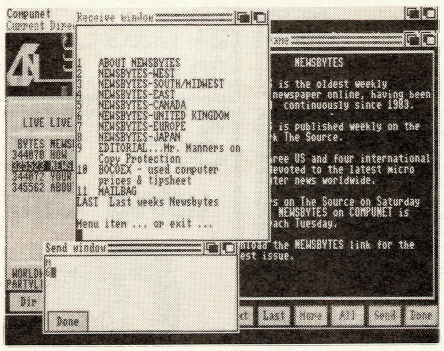
With all the hardware and software in place it's time for the first call to Compunet. Compunet can be accessed through over seventy telephone numbers around the UK and Eire, the UK can use the International Packet Switch Networks to gain relatively cheap access.

During off-peak periods Compunet runs a demonstration area that allows potential users the change to try the system out before parting with any hard-earned cash. The area is available 6pm to 8am during the week and



all day at the weekend.

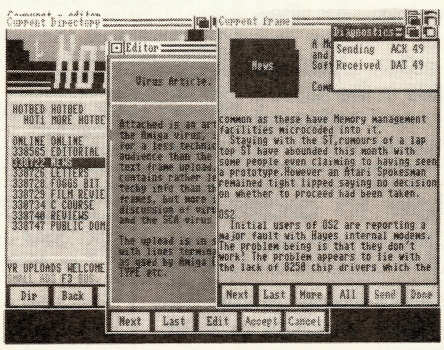
Once the Compunet terminal software is run it will prompt for a telephone number; type it in CAREFULLY! On my first call I mistyped the number and inflicted the screech from my modem on some innocent soul. After a couple of rings ISTEL's computer should answer and display a couple of error messages (don't be alarmed!)



before putting you in contact with the Compunet computer.

At last Compunet's message of the day will appear and you will find yourself at a login prompt. As we are new to the system we type 'NEW-USER' for the username it's 'INTRO' for the password and we are in...

Compunet responds by displaying a welcome message and then a directory of entries which give a 'taste' of Compunet while not allowing full access. As well as full details of the Compunet phone numbers, and



nearly two hundred pages of indices to the full range of Compunet areas there is some demo software, IFF pictures, details of how to join, prices and special offers on modems.

Amongst the C64 software that can be downloaded at no cost is a stand-alone demo version of Compunet's Multi-User Game, Federation II. This is an online adventure/trading game in which the other characters met can be either computer generated (called mobiles) or other players. But be warned, it's addictive!

After fifteen minutes on-line the Compunet host computer asks users of the NEW-USER account to log-off and disables, all other commands. By this time its possible to download enough data to provide an hour or two's reading. It's particularly worthwhile downloading the indices as they give a good idea of the breadth of pages and services that can be found on the online database.

After logging off for the first time new users using the C64 should type CNSAVE. This saves to disk some extra software which was automatically downloaded from Compunet on first connecting. It contains updates to the online code in the modem's ROM which should be CNLOADed before subsequent use of the modem, this will shorten the time taken to log on.

If the demonstration area has convinced, full access to Compunet can be obtaining by taking out a subscription for an account. This can be done by ringing Compunet's voice line and paying by Access or Visa or by writing to the address given below.

Once registered the new user gains access to most of the database, apart from a few closed user group areas (CUGs) such as parts of the ICPUG area. C64 users should GOTO CNETU where a number of useful utilities that modify the Compunet online code can be downloaded mostly at no cost. These greatly enhance the ease of use and facilities provided by the software.

From then on Compunet is what you care to make of it!

Contact: Compunet, Unit 26, Sheraton Business Centre, Wadsworth Road, Perivale, Middlesex UB6 7JB. Telephone (Voice): 01-997-2591. J.L.

COMMODORE

COMPUTING INTERNA

JANUARY 1989

DRIVE INTO THE FUTURE!

COMPUTERS WITH WHEELS!

SUPERCHIPS!

MIDNITE ASSEMBLY

SUBSCRIBE!

You can keep up to date with everything that's happening on the Commodore scene by taking out a subscription to Commodore Computing International.
This unique international magazine has now been published every month for over six years and you can have it mailed to you direct. Simply fill out the coupon for this special subscription offer, and send it to us now.

To: Commodore Computing International
120-126 Lavender Ave, Mitcham, Surrey CR4 3HP.
Please make cheques payable to: CROFTWARD LTD.

Please send me 12 issues of Commodore Computing International
☐ Subscription rate U.K. £16.50
☐ Europe £26.50
☐ Outside Europe £39.50 Airmail
Date subscription to commence

☐ Cheque enclosed
☐ Please debit my Access Card No

Expiry date

Signature

Name

Address

Postcode

County

Telephone (home)

(business)

M FR11
50
YDM7

...ER EDITION

BUSH? NO WAY! I VOTED C.C.I. FOR PRESIDENT

PLUS ALL THE MEGASTARS OF '88! AND MUCH, MUCH MORE!!

I'M MARIA C.C.I. READERS' CHRISTMAS BOX!

WIN FABULOUS PRIZES IN OUR FANTASTIC COMPETITIONS!!!

THUNDER BLADE STORMS IN!

DANIELLE, the gorgeous and intelligent (sorry, intelligent and gorgeous, we mustn't be sexist) P.R. Manager of U.S. Gold has told us that Thunderblade is the greatest thing since . . . the French Revolution! (The French Revolution? What's that got to do with it? We hear you cry. Well, in fact, nothing. The 1789 event was suggested by Tony Horgan, whose eyes sparkle at the very mention of Danielle in a most romantically French way! So that's why he thought of it, probably.) The delightful Danielle, at this moment sunning herself in Lanzarote with the equally sensational Anne Brown, has so raved about U.S. Gold's end-of-year biggie that we have agreed to give you a Thunderblade Comp. with some fantastic prizes.

First you can win a terrific radio-controlled Helicopter, and receive it from the hands of Danielle herself. And she will accompany the winner (plus a friend) to an all-expenses-paid day visit to Tiertex, the programmers of Amiga version of Thunderblade, to see which secret projects they are working on now. *And (yes, there is more!) you will get a Thunderblade Tee-Shirt and a Thunderblade poster, badge and, of course, a Thunderblade game (64 or Amiga, you tell us which).*

25 Runners up will get each a Tee-Shirt and a Thunderblade game.

And the next 25, Thunderblade posters and badges.

So, for you potential Thunderbladers, all you have to do is answer the positively fantastically easy questions:

1) Who programmed the 64 version of Thunderblade?
2) How many levels are there in the game?
3) What do the tower blocks resemble?
4) Name two types of enemy craft you encounter during the mission?
5) In which level might you stop off for a spot of fishing?
6) What do you lose at the end of the first stage?

Answers on a postcard please to: Danielle's Thunderblade Comp., c/o C.C.I. 40 Bowling Green Lane, London EC1R 0NE. To reach us by the *15th, February* 1989.

Vive La belle Danielle!

NOW WITH STOP PRESS, EVERYONE CAN HOLD THE FRONT PAGE NEWS.

STOP PRESS

'STOP PRESS' is the ideal DeskTop Publishing program for home enthusiasts, schools, societies and small businesses. 'STOP PRESS' makes it simple to create professional newsletters, leaflets, forms and flyers, in fact anything where text and graphics are required – placing you right at the heart of the DeskTop Publishing Revolution.

Text can be entered from within 'STOP PRESS' or imported from your word processor with fully automatic on screen text formatting including centering, ragged right and literal justification.

The graphics capabilities of 'STOP PRESS' are equally versatile. The ability to import digitised and scanned images is complimented by facilities for drawing spraying and painting.

Enhanced cut and paste facilities replace traditional methods (no scissors and glue supplied or required).

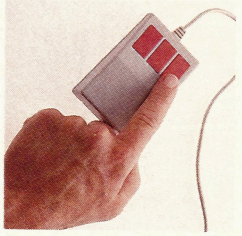
'STOP PRESS' includes an excellent zoom facility for adding those finishing touches before your work is output to a wide range of Epson compatible dot matrix printers.

EXTRA, EXTRA

Extra, Extra is a collection of instant clip art and new typefaces covering a variety of subjects and styles.

AMX MOUSE

Stop Press can be used with a joystick or keyboard but the AMX Mouse gives you the control and flexibilty which you would expect from the most accurate pointing device available.



Established as the market leader the AMX Mouse has been the driving force behind a whole host of new applications from other software houses. With its unique design and high resolution movement the AMX Mouse is a must.

LET'S LEAVE THE LAST WORD TO THE PRESS...

"the most comprehensive in its field... very high quality printouts are possible"
Amstrad Action

"the best graphics available in a DTP package"
8000 Plus

"exceptionally useful... the manual was hardly necessary"
Commodore Computing International

"it's phenomenal... this product is worth every penny"
Educational Computing

"one of the most professional packages I've seen... all I can say is go out and buy it"
A&B Computing

'STOP PRESS' IS AVAILABLE FOR	SOFTWARE ONLY	WITH AMX MK. 111 MOUSE	EXTRA! EXTRA!
ACORN BBC/B + /MASTER	£49.99	£79.99	£24.99
AMSTRAD PCW 8256/8512	£49.99	£89.99	–
AMSTRAD CPC 6128	£49.99	£79.99	£24.99
COMMODORE 64/128	£39.99	£69.99	–

These products are available from all good computer dealers or freepost direct by cheque, Access or Visa. All prices include VAT, postage and packing. Become your own publishing baron with 'Stop Press' and start the presses rolling.

AMS
ADVANCED MEMORY SYSTEMS

IMAGINATION AT YOUR FINGERTIPS

166-170 WILDERSPOOL CAUSEWAY, WARRINGTON, CHESHIRE, WA4 6QA

FOR INSTANT ACCESS OR VISA ORDERS TEL: (0925) 413501 · DEALER ENQUIRIES WELCOME TEL:(0525) 222211

TECHNICAL DEVELOPMENTS

THE EXPERT BACKUP CARTRIDGE

- ***Most Advanced backup cartridge in the world.***
- ***Unlike all other backup systems the expert uses Ram, therefore the backup software loads into the cartridge, because of this the Expert is always on top of the latest protection methods.***
- ***Comes with the latest 3.2R software.***
- ***Undetectable by software!***
- ***Backs up ALL your games!***
- ***VOTED No. 1 Backup System in Europe!***

BACKING UP: No matter how the game was loaded, it will copy from tape/tape, tape/disk, disk/disk, disk/tape. All backups saved in one single file. Cartridge not needed for reloading.
COMPACTOR: Save minimum 3 games per disk side. The expert compacts games making them smaller in length thus enabling faster reload & more games on disk or tape!
FAST LOADERS: Disk fastloader "BOOT" uses no disk space! Loads backups in average 25 seconds. Tape backups reloading takes less than 2 mins!
ROCKET LOADER: Fastest disk loader available. Loads backups in an average 6 SECONDS. Thats at least 25 times faster!
MACHINE CODE MONITOR: Best machine code monitor available. Intelligent hardware hides the monitor making it invisible & impossible to detect. Use it to learn machine code, a hackers dream due to it revealing any part of memory. Includes all usual monitor commands & more! Add poke/cheats from magazines.
PRINTOUT: Print out your machine code listings or even your favourite hires or multi-colour screens. Works on all CBM compatible printers.
SPRITE EDITOR & CUSTOMISER: Change all the sprites in a game, customise them with the free easy to use sprite editor.
EXPERT EXPRESS: Turns the Expert into a dedicated fast loading cartridge. It even loads programs over 200 blocks.
CHEAP UPGRADES: You'll never need to send the expert back. Rival products must be sent away for upgrading often costing as much as the product itself. With the expert, watch our advert for the latest software version & send off £3.99 for the disk or tape & instructions!
RAVE REVIEWS: Don't just take our word for it.....
"The expert is the best possible buy" (Your CBM Aug'88)
"Highly recommended" (C.C.I. JUNE 88)
"The expert cannot be beaten" (Your CBM Aug'88)
COMPATIBLE: Works on ALL 64's, 128's & all CBM type disk drives/datasettes.
OTHER FEATURES: Integral reset cartridge, auto infinate lives finder, auto-fire enabler, joystick port swapper, fast disk formatters, Hires screen displayer, Easifreeze etc!
The expert speaks for itself even proven by reviews to better Action Replay Mk4! Try it out you won't be dissapointed.
Available for disk or tape users.
Please specify disk or tape when ordering.

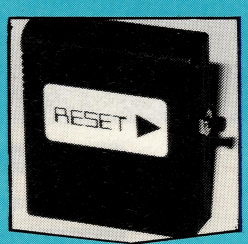
Only £29.99

TAPE HEAD ALIGNER V2

- ***Quick and easy way to align heads.***
- ***Stops many loading problems arising.***
- ***Works on all CBM type datasettes and all C64, 64C, 128 computers.***
- ***Aligns datasettes to industry standards.***

Hundreds sold. Why? This is the best for its price so forget more expensive imitators.
This kit enables accurate alignment to industry standards by using the digital alignment tape.
Now includes special high speed loading program which makes sure you've aligned your heads correctly and still tape includes free head cleaner, screwdriver & comprehensive instructions.
If demagnetizer & solution is also required add £2 extra.

Only £6.99



UNSTOPPABLE RESET CARTRIDGE Mk2

- ***100% guaranteed to reset EVERY 64 game even those not yet available!***
- ***Fits into cartridge port.***
- ***New circuitry makes it IMPOSSIBLE to detect, defeating ALL protection methods.***
- ***Protected against damaging your computer (unlike others!).***
- ***Works on all C64, 64C, 128.***
- ***Quite simply the best availble and comes with instructions.***
- ***Add pokes, cheats etc from 64 mags.***

Owners of Unstoppable Reset cartridge send cartridge plus £2 for new version.

Only £5.99

★ ★ ★ BARGAIN BOX ★ ★ ★

100% CBM 64 compatible datasette	£23.99
Repairable C64/64C power supply	£23.99
2 Way Aerial Splitters	£2.49
Replacement Amiga Mouse	£23.99

COMPUTERS

- ***Prices include p&p & 12 month warranty***

CBM 64 HOLLYWOOD PACK
CBM 64, datasette, joystick, reset Cartridge, Rambo 8 Cobra & 8 more games. Only £159.99

CBM 64 "ENTERTAINMENT PACK"
CBM 64, datasette, joystick, reset cartridge. Backup Board, games, music tape, Bush Walkman, Yamaha Midi Keyboard. Only £219.00

AMIGA A500 PACK
A500 computer, joystick, modulator, mouse, 5 blank disks, tutorial disk, computer dust cover, 5 Public Domain Software disks. Only £389.99

1541c II DISK DRIVE
Sleek & compact disc drive for CBM 64 with external PSU & 10 Blank Disks. Only £175.99

DUST COVERS

- **Fully tear proof, water resistant**

CBM 64	£4.99	1541 DISK DRIVE	£4.99
CBM 64c	£4.99	AMIGA A500	£6.99
DATASETTE	£4.99	AMIGA A1000	£9.99

DISK DRIVE DOCTOR

- ***Reveals mechanical faults.***
- ***Corrects alignment, back-stop & motor speed settings.***
- ***Checks head movement for wear & friction.***
- ***Cures disk drive loading problems.***

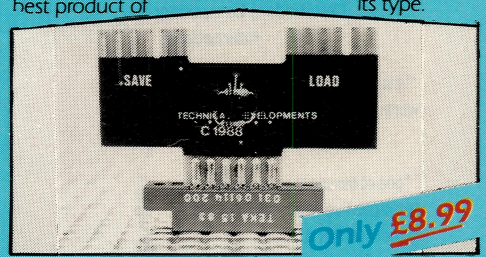
The full kit comprises of master program on tape, digital diagnosis disk, screwdriver & instructions.
Please specify 1541, 1541c or 1570 when ordering.....

Only £18.99

TAPE/TAPE BACKUP BOARD

- ***The ultimate tape duplicator.***
- ***No controlling software needed.***
- ***Backs up ALL tape games, even multi-loads!***
- ***Copies programs whilst loading them.***
- ***IMPOSSIBLE to detect. Defeats all protection methods!***
- ***Works on 64, 64C, 128, VIC 20, PET.***
- ***Requires access to two CBM type datasettes.***
- ***100% successful.***
- ***NEW LED light indicator indicates loading!***

Very easy to use, press play on one datasettes & play + record on the second datasette. Digital circuitry reshapes the program producing as good as if not a better copy than the original. Backs every known game available. Now known as the best product of its type.



Only £8.99

LIGHT PEN

- ***Move light pen over TV screen and draw pictures!***
- ***Draw accurately in colour or mono***
- ***Includes light pen, software, instruction & interface for 64/128***
- ***Ideal for all ages, even the kids!***
- ***Features include fill, draw circle/line/rectangle/freehand with various nibs, invert, magnify, print pictures on a printer etc.,***

Available for disk or tape users.
Please specify when ordering

Only £23.99

PLEASE USE BLOCK CAPITALS

Technical Developments
Dept. 7 17 West View,
East Bowling, Bradford,
West Yorkshire,
England BD4 7ER.

How to order...
All prices include VAT and Free postage (UK only)
Payment by:- cash, cheque/postal orders made payable to:- "Technical Developments"

Overseas ordering...
Payment:- Sterling only please.
Postage charge if not stated
Europe £2.00 Outside Europe £3.00

TITLE Mr/Mrs/Miss INITIAL: ..... SURNAME: .....
ADDRESS: .....
.....
..... POST CODE .....

QTY	ITEM	PRICE
TOTAL INC. POSTAGE (Free for UK)		£

Tel (0274) 734678 — lines open 9am - 6pm Monday to Friday only. Dealer, govt and school orders welcome.

AVERAGER

Stocks and shares can be a dangerous place to put your money. Peter McDonald shows you how to make the best out of a falling market.

There are some programs, designed, I suppose, to help teachers and lecturers, which enable one to arrive at average exam marks, either for a pupil (averaged over all his subjects) or for a class (averaged over all the pupils). Despite the title, the present offering has nothing to do with exam marks.

Its aim is simple. It is to help the investor in a stock market which has fallen. Let us say that I have bought shares at X pence each. Then the price drops to Y pence per share. I judge that anyone who buys at Y pence is sure to make a profit eventually for (I reason) the price will one day increase. If I buy some more of those shares at Y pence, I shall hold my original take plus the new ones; they will each be worth Y pence, though some will have cost me X pence. How much will the shares have to rise before I can recoup all my outlay? How much before I am in profit? (Obviously the answer to the second question is: 'As soon as the price exceeds what you need to recoup your outlay.' So if we know the answer to the first question, we shall automatically know the answer to the second.)

Let us take an easy, practical example, using figures which will not over-stretch my mathematical skills. Say I hold 1,000 shares in ABC Ltd for which I paid £1 each. O.K.; the total cost is therefore £1,000 at that point. Say they fall in value to 50p each. If I buy 1,000 at the new price, they will cost me £500. So the 2,000 shares I now hold in ABC Ltd will have cost me £1,500 (£1,500 + £500). But they are only worth 50p each, i.e. £1,000 in total. To get back what I paid for them (i.e. £1,500 in total) I should have to wait until the value of the 2,000 shares rose by £500. A rise of £500 in the value of 2,000 shares equals a rise in value of 25p per share. By adding 25p (the required rise) to 50p (the current value per share) we arrive at a figure of 75p. If I sell at that price, I shall receive 2,000 x 75p = £1,500 (which is what I paid for them). In short, I shall have reached the point where the gains on the shares I bought cheaply will have offset the loss (itself reduced by the rise in value of the shares) on the ones I bought at £1 each.

To do that, however, the share price has to rise by 25p on 50p, i.e. by 50%. Is it likely to rise by as much as that? This is where one's skill as an investor comes into play. But at least this program enables you to see what rise is necessary before you can recoup losses by buying cheap.

What if you are not tempted by the Stock Exchange? Well, the program could be adapted to help a shopkeeper. He buys in some items; they sell reasonably, but not sensationally. He then has a chance to buy some more at a reduced price. If he does this, how far could he reduce his present selling price to attract more custom, whilst making a good profit?

Now, let us look at the listing. Lines 20-60 (inclusive) print on the screen a brief explanation of the purpose of the program. There is provision (Lines 320 and 330) to do another calculation once you have finished the first. For the second (and any subsequent) calculation the descriptive matter at the beginning of the program is unnecessary. So instead of starting the program off again at Line 10, Line 330 clears the screen and then gives the command 'RUN 90'. This does all that GOTO 90 would have done, i.e. skips the descriptive matter, and starts at the operative part of the program. But by using RUN instead of GOTO, we wipe out the existing variables, so that you start with a clean sheet once more. (To test this, replace RUN with GOTO on Line 330; RUN the program once, and then, on the repeat, simply press RETURN, without entering any amount, when asked the average cost of the existing holding. This should give a figure of '0', by default. In fact it will give the figure you used the first time you did the calculation.)

Some people will know the average price they paid for the shares. For exaple, if they bought them in one 'take', they will probably remember the price per share, having memorised it so that they can see if the value is up or down in the daily Stock Market lists. They present no problem: they answer 'Y' to the query in Line 100. Because they have already entered the total number held, the computer 'knows' the total paid for the shares. If the 'punter' does not know what price per share he paid, he must enter the total sum he paid. Either way, the computer has the information about the number of shares and the price paid for them.

You are then asked to say how many new shares you intend to buy, and at what price. That price, of course, is also the current value of the shares you already hold.

So once you have entered it, the computer is able to calculate what the total value of the holding (i.e. old and new shares combined) will be. It is also able to calculate the total cost.

From this it is able to work out how far the money paid for all the shares will exceed the current value. Knowing the difference between those two figures enables it to calculate how much rise per share is necessary to 'even things out' (difference divided by total number of shares). By adding that differnce to the current value of the individual share, the program can tell you the actual price per share you need to realise in order to break even. And the program also expresses this as a percentage since most of us find it easier to think in these terms when trying to estimate possible rises and falls. ('I only need a rise of 10% and I shall be OK').

The INT function has been used fairly freely to keep under control the number of figures after the decmal point.

There are the usual 'gimmicks' at the end . . . the invitation to do another calculation if you wish, and the provision for doing a save and replace by typing 'GOTO 9999' if you want to amend the program and replace the old version with the new.

I have made liberal use of SLEEP. Nothing is more surely a question of

continued on page 30

continued from page 29

taste. There are times, I suppose, when the programmer wants the user (i.e. the one towards whom he is trying to be friendly) to consider a point. SLEEP can help to provide a break in the action for that purpose. But even where there is no need for this sort of break, a program (especially where rapid calculations are being done) is, by some odd paradox, easier on eye and mind if it is allowed to appear on screen interspersed with a series of gentle pauses, instead of blasting information at you in a steady stream like a high-pressure hose. But the impatient can remove the SLEEPs is they wish.

One cannot normally include it in a program, because programs in magazines have to be self-contained. But it is perhaps worth mentioning that if you are using a set of programs, and want to control them by a menu, Line 340 (which comes into plan if anything other than 'Y' is typed in answer to the question on Line 330) could be altered to read:

340 SCNCLR: RUN "MENU"

Once again I have tried to give less experienced 128 owners a program which does not entail too much copying (under 40 lines), uses one or two devices from which the beginner may learn, and serves a purpose which is slightly out of the ordinary but can certainly be adapted for many other uses.

P.M.

```
READY.

10 SCNCLR:REM:AVERAGING...(C)PETER MCDONALD
20 PRINT"THE OBJECT OF THIS PROGRAM IS TO DETERMINE HOW MUCH THE MARKET"
30 PRINT"WOULD HAVE TO RISE IN ORDER THAT YOU COULD SELL WITHOUT LOSS A HOLDING"
40 PRINT"COMPRISING (1) AN EXISTING HOLDING OF SHARES PLUS"
50 PRINT"(2) ADDITIONAL SHARES YOU INTEND TO BUY (AT TODAY'S PRICES)"
60 PRINT"IN THE SAME COMPANY....."
70 PRINT:PRINT:PRINT"READY NOW (Y/N)?"
80 GETKEY X$: IF X$="Y" THEN SCNCLR
90 INPUT"TYPE NUMBER OF SHARES NOW HELD";OH:PRINT
100 PRINT"DO YOU KNOW THE AVERAGE COST PER SHARE OF THE EXISTING HOLDINGS (Y/N)?"
110 GETKEY A$:IF A$="N" GOTO 350
120 PRINT:INPUT"AVERAGE COST (IN PENCE) OF EXISTING HOLDINGS";OP
130 OT=INT(((OH*OP)+0.005)*100)/10000
140 PRINT:PRINT"TOTAL COST OF ORIGINAL HOLDING =£";OT:SLEEP2
150 PRINT:INPUT"NUMBER OF ADDITIONAL SHARES TO BE BOUGHT";PA:PRINT
160 INPUT"PRESENT PRICE PER SHARE IN PENCE";PP:PRINT
170 NH=INT(((PA*PP)+0.005)/100)
180 T=(OH+PA)
190 C=OT+NH
200 A=INT(((C/T)+.005)*100)/100 :SLEEP 2:SCNCLR
210 PRINT"COST OF";PA;"ADDITIONAL SHARES AT";PP:"P EACH = £";NH: SLEEP2
220 PRINT"TOTAL COST OF";T;"SHARES =£";C:PRINT:SLEEP2
230 TV=INT(((T*PP)+.005)*100)/10000: D=(C-TV)
240 PRINT"TOTAL VALUE OF";T;"SHARES AT";PP:"P PER SHARE =£";TV:SLEEP2
250 PRINT"DIFFERENCE BETWEEN THIS AND TOTAL COST = £";D:PRINT:SLEEP 2
260 GS=INT((D/T)*10000)/100:SP=(GS+PP)
270 PRINT"RISE PER SHARE REQUIRED=";GS;"P":SLEEP2
280 PRINT"TO RECOUP COST, SELL AT ANYTHING OVER";SP;"P PER SHARE"
290 P=INT(((GS/PP))*10000)/100:SLEEP 2
300 PRINT"I.E. ON A RISE OF APPROXIMATELY";P;"% AS AGAINST TODAY'S PRICES."
310 PRINT:PRINT:PRINT:
320 SLEEP 4:PRINT"DO YOU WISH TO DO ANOTHER CALCULATION (Y/N)"
330 GETKEY B$: IF B$="Y" THEN SCNCLR:RUN 90
340 END
350 PRINT:PRINT"THEN ENTER THEIR TOTAL COST:":PRINT
360 INPUT"COST= £";OT:GOTO 150
9999 DSAVE"@AVERAGER"
```

MISTER JOYSTICK'S

Crystal Standard	£14.95
Crystal Turbo	£16.95
Sureshot Standard	£11.95
Sureshot Turbo	£14.95

All prices include VAT and delivery

Have you got your hands on one yet?

NEW FOR 88!

CRYSTAL

ALL JOYSTICKS CARRY A FULL FIVE YEAR GUARANTEE!

FREE DELIVERY

Please send me full product details

Name .....

Address: .....

.....

.....

Melton Computer Supplies

P.O. Box 2
Melton Mowbray
Leicestershire
LE13 1YG

Telephone:
(0664) 410666
Fax: (0664) 410221

VISA

24 HOUR ORDERLINE

A Yak lover in Wales advises Jez to create an 'Ungame', tries for a piece of hardware that will change the feel of gaming and finally finds a good word- sound- for the Amiga. Yes, Minter's the name.

GREETINGS EARTH-CREATURES. I greet you again from deepest Wales, where I am currently situated with a nearly-full hard disk drive, a small receptacle containing hot water, a diffusion of plant leaves, and cow secretions (a drink popular on my home planet), and a bedraggled and somewhat pissed-off Siamese cat (recovering from his first encounter with the concept and experience of 'a bath').

The sprite and rasta routines alluded to in the last missive have congealed into an almost-finished zap game, which I am currently working through the nights on so that it'll be finished for people to have a blast on at the Atari show. Although I've worked on the ST on and off for a couple of years, that was all lightsynth work and this is the first 16-bit game I've actually written. It's really great to be able to use fast, colourful software sprites instead of hardware sprites like on the '64, where you were constantly worrying about having more than eight in one horizontal raster zone and had to design games around the limitations in the harware. On 16-bit, if I want to use 256 sprites during the Warp sequence, I just code them in and there they are. Sure, you cop a reduction in frame refresh rate the heavier you load the sprite routines, but you can still get plenty sprites in and keep the speed reasonable, and they never, ever flicker. And with my zarjaz rasta routines, I can change the colour on each individual rasta line if I want to, and thereby get more colour into an ST game then you see on most Amiga ones. I think I could really get to enjoy programming games on 16-bit. Even the benighted ST sound chip can be coaxed into producing some reasonable zap-game sonix if driven by an enlighted sound-FX-interpreter, although I'd rather work with the Amiga's sound chips . . .

I just got the game to that point where all the gameplay is in and you can actually play a single, complete game, with extra ships, warps and bonuses where they should be, and a score at the end. Most rewarding when you see all the parts come together at last into a coherent game. The game must be OK, because I've taken to turning off all the lights, putting on some Iron Maiden and getting down to some serious zapping these nights. (Iron Maiden is excellent shoot 'em' up music, and my game is a real thrash-metal turbo-speed blaster — it's actually a conversion of my first Vic-20 title!).

The game itself is an unholy union of Defender, Stargate and Yak, and yes, of course there are llamas . . .

I've been so into the coding just recently I haven't even had much time for my PC-Engine, despite getting some zarjaz new titles for it (although I have been giving Fantasy Zone the odd thrashing for old times sake). This week I'm hoping to get my hands on a new game system just come out in Japan, about which I know not a lot at the moment except that it's about £100, it's 16-bit, and it's supposed to blow the PC-Engine away. This I just have to see. The first games for the system will be Space Harrier II and Super Thunder Blade, and I'm drooling in eager anticipation already.

My Amiga at the moment is mostly being used for playing Starglider II, which is just a totally wicked, awesome, amazing and zarjaz game. Cruising around the solar system descending on the various planets to wreak hideous revenge on the scum-bag Egrons is just my cup of hot water, diffusions and secretions. The graphics are smooth and fast and the sonics just ace, especially the sampled Star Trek IV whalesong used for the Egron Space Whales. I enjoyed the wholly unnecessary but nonetheless groovy Painting With Rolf option too, which reminded me of 'Doodle — The UnGame' on the old 'I, Robot' arcade game :now there's a fine arcade game, surely some clever 3D-orientated software house could bang out a 16-bit version of that, would go down well if nicely implemented —ethinx . . . how about it Jez?).

I look forward with interest to seeing the new Super ST which Atari plan to release next year, as I'll probably have to do versions of any games and, of course, Trip-A-Tron, for the new system when it comes out. I especially hope that the old AY sound-chip will be out on it's silicon ear, maybe even replaced by the mythical AMIE sound chip, rumoured to be of excellent quality but never actually seen by anyone, ever. I must admit that what I envy the Amiga most is not the scrolling or the extra colours, for both can be implemented on the ST with a little programming ingenuity, the but sound chip and associated DMA sample playback stuff. Sure, you can play samples on the ST, but they eat proc time and generally sound well tinny, whereas when I demonstrate Amiga games to people they often assume I've got a CD on when the game music starts up.

I shall finish now as I have an empty receptacle, a dry Siamese cat, and a cylindrical starfield to implement. Hopefully next time I shall get to report on Space Harrier II and the new Japanese hardware. If it's as good as I've heard, the face of videogaming in the UK will be changed forever when it eventually gets over here, along with the PC-Engine. I won't say 'see you at the Atari show' because doubtless none of you would be seen dead there. Cheerio for now, take it easy and don't miss Neighbours . . .

AMIGA USER INTERNATIONAL

DECEMBER 1988

£1.95
CANADA $4.95
USA $4.50

STEREO SOUND!!
MODELLER 3D
L.A. AMIEXPO

THAT'S ENTERTAINMENT!
SPECIAL AMIGA GAMES SECTION

ALBEDO
BATTLECHESS
PIONEER PLAGUE
HYBRIS
...AND MUCH MORE!

SUBSCRIBE!

You can keep up to date with everything that's happening on the AMIGA scene by taking out a subscription to Commodore AMIGA User International.
This new and unique international magazine is now published every month and will be mailed to you direct. Simply fill out the coupon for this special introductory offer, and send it to us now.
Please make cheques payable to: CROFTWARD LTD

To: Subscriptions Manager, AMIGA User International
120-126 Lavender Ave, Mitcham, Surrey CR4 3HP.
Please send me 12 issues of AMIGA User International

- ☐ Subscription rate U.K. £23.00
- ☐ Europe £32.00
- ☐ Outside Europe £46.00 Airmail

Date subscription to commence

- ☐ Cheque enclosed
- ☐ Please debit my Access Card No.

Expiry date Signature

Name
Address Postcode
County (business)
Telephone (home)

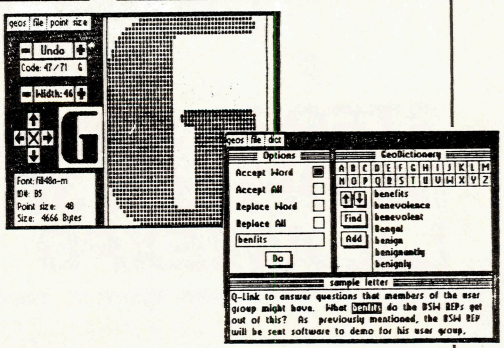
ONLY THE AMIGA MAKES IT POSSIBLE!

TORCH 2081

BOMBUZAL

GEOSPELL

Bob Collyer examines a Geos utility that casts a schpell offer hees orthogravic problems



THE Geos family of products, The Graphic Environment Operating System, series of applications continues this month with a look at the spell checker system called GeoSpell.

A complete spell checker for documents produced using any version of GeoWrite that will find all your spelling mistakes quickly and easily. How I wish this utility had been available when I was at school! Do you remember that there were a few horrible words that you were always spelling incorrectly the teacher would make you write them out 100 times each time you misspelled one. Well, nowadays, the situation has changed somewhat. For home computer owners, producing letters and other documents that are word perfect is now possible with the aid of a spell checker. Yew kno hte sor tof speling miskes tha tcreep intoo eventh shortes scentance. This kind of error could be spotted straight away with GeoSpell. Did you ever stop to think what has become of us since the computer revolution? What has happened since those days we were taught english spelling by writing words out one hundred times parrot fashion? If the computer has helped us to improve our understanding of the universe then why is it that we can still make simple mistakes and need something like GeoSpell to correct the errors? How far have we come? Schoolchildren now use calculators in maths lessons, the result is many children who are unable to do simple mental arhtimetic, (But, of course, can perform far more complex calculations in a much shorter time.) Will they soon be using word processors with spell checkers? I think perhaps they will. This might result in many who cannot spell without the need of a handy spell checker. I hope not all the parrots have died by then.

By the time you read this review some errors may have crept in at our typesetters but I can assure you that each and every word (including the deliberate mistakes) have been checked and, if necessary, corrected using GeoSpell.

It is possible that some typesetters have a computerised system to spot words that are misspelled, most seem not to use them however. The reason for this, I believe, is because it is still possible to make many mistakes without spelling words incorrectly. ***Dew yew sea watt eye mean?*** Then there are some important words that could missed out even. A program that can make sense of entire sentences is what they really need. One day someone somewhere will make such a utility that doesn't use 64 billion K!

This Geos application has a dictionary of 28,000 words, large enough to cover nearly all the documents you will need to process. There will be many words, however, that will be used that GeoSpell cannot understand. For instance you may write about "CCI". We know what is meant by "CCI" (Do we? Ed) but GeoSpell doesn't.

"There is a personal dictionary file on the disk into which you are able to build up your own frequently used words that GeoSpell will come to learn."

There is a personal dictionary file on the disk into which you are able to build up your own frequently used words that GeoSpell will come to learn. This will expand with use and grow because it can be added to each time you encounter a new word that is not understood by GeoSpell, subsequent scans by the spell checker will encounter these words and "understand" them.

Once your document has been spell checked, sections containing misspelled words are displayed. When a word that is not in the 28,000 word dictionary is encountered it will be highlighted in your document. You then have several options available to you. 1) Accept word and leave alone. 2) Accept All this skips over repeated instances of the word. 3) Replace word. 4) Replace All. After your choice GeoSpell then goes onto find the next word not in the dictionary. If you are not sure how to spell the highlighted word then it is possible to "find" the word by searching through the dictionary automatically. Once the correct word is found you may choose it to replace the existing occurence of that word.

When you have finished checking your document then it is a simple matter of saving and printing your word perfect document.

Also on your disk you will find GeoFont. Create your own typefaces or change existing ones with this utility. There is a Geos application available called Fontpack where you can buy about twenty new typefaces ready made. GeoFont lets you create your own free of charge, all you need is a lot of patience, the creativity of your own mind and then you may produce a pixel by pixel beautiful new typeface.

This is not as easy as I have just described as typography is an art form in itself. Each individual letter and numeral must carry that unique style throughout the entire alphabet, not an easy task by any standard but if you are capable then the new font may be saved to disk and used in any of your documents. Quite a financial saving for the DIY fan so why don't you do it yourself?

On the reverse of the disk comes all the latest printer drivers and input device files. The latest disk copy version to backup your Geos workdisks is also on the reverse of the disk. A handy readme file contains all the information on these new driver files. In all this disk contains so much that is good for you to enhance your existing GEOS. In order to ensure perfect spelling with a perfect typeface when you next use GeoWrite, go out and get this very versatile package. ***B.C.***

Contact: Financial Systems Software
18 High Street, Pershore, Worcester
WR10 1BG. Tel. (0386) 553153
Price: £16.95

A3

HARWOOD'S

Your FIRST choice for A·M·I·G·A

'Buy a Bundle Save a Bundle'

STOP PRESS
We are now shipping NEW AMIGA'S with the latest version 1.3 Kickstart operating system built in!!!

AMIGA INTERCEPTOR™ PACK 1

"When it comes to realism, ease of control and state-of-the-art presentation, Interceptor's ace." THE GAMES MACHINE 7/88

"HARWOODS HOMBRE" Always hits the mark on quality and price

AS WELL AS THE AMAZING AMIGA A500 OUR NEW INTERCEPTOR PACK ALSO INCLUDES THE FOLLOWING . . . ABSOLUTELY FREE!!!
(Please note - certain games require the use of joystick(s))

- INTERCEPTOR - The Ace Flight Combat Simulator
- GOLDRUNNER - Vertical Scrolling "shoot-'em-up"
- KARATE KID II - Classic Kung Fu Action
- LEATHERNECK - Action-packed Army Combat game
- TV MODULATOR ● AMIGA TUTORIAL DISK
- MOUSE MAT ● 10 BLANK DISKS IN LIBRARY CASE

AFFORDABLE AMIGA!

Or Just *£19.09 monthly

£399

All our AMIGA A500 machines contain the following standard features . . . ● 1 MEG DISK DRIVE ● STEREO SOUND ● 4096 COLOURS ● MULTI-TASKING ● BUILT-IN SPEECH SYNTHESIS ● MOUSE ● TWO MANUALS ● OPERATION SYSTEM DISKS

ORDERING Made Easy

ORDER BY PHONE–Simply call our 24-Hour Hotline using your Access/Visa or Lombard Credit Charge Card.

ORDER BY POST–Make cheques, bankers-building society drafts or postal orders payable to GORDON HARWOOD COMPUTERS
(N.B. Personal or business cheques require 7 days for clearance)

PAY AT YOUR BANK–If you wish to pay by Credit Giro Transfer at your own bank, phone us for details and to obtain a bank ref. number.

DELIVERY–Choose from either . . .
FREE POSTAL DELIVERY for all goods in UK Mainland (5-7 day delivery) OR
SPEEDY COURIER SERVICE–Add just £5 per major item for next working day delivery
(Orders normally despatched on day of receipt of payment or cheque clearance)

SERVICE Compare our Service

● FULL 12 MONTH WARRANTY - If any goods prove to be faulty within 30 days of purchase they will be replaced with A NEW UNIT. For the remainder of the Guarantee Period, all warranty repairs will be made FREE OF CHARGE!

● COLLECTION FACILITY - Any faulty computer or monitor will be collected from your home FREE OF CHARGE within this Guarantee Period!!!

● FULL TESTING PROCEDURE - All computers are thoroughly tested prior to despatch

CREDIT TERMS
LICENSED CREDIT BROKER

12 - 36 Month H.P. terms available subject to status. Please phone. We will be only too pleased to send written details and application form. (Examples quoted are based on 36 months with no deposit)

INTERCEPTOR PACK 2

GAMES & MONITOR PACK

AMIGA A500 (Interceptor Pack 1) supplied with CBM 1084S Stereo colour monitor.
(N.B. This pack does not include a Modulator)

MONITOR MADNESS

Or Just *£30.10 monthly

£629

UPGRADES Add Power to your Amiga

NEW!!! CUMANA 1 Meg. Drive with enable/disable switch. NO MORE UNPLUGGING YOUR SECOND DRIVE FOR CERTAIN GAMES - Just throw the switch!!!

ONLY **£99.95**

MONITORS Switch on to Quality

Connect to AMIGA and others, with our FREE lead. (Please specify when ordering)

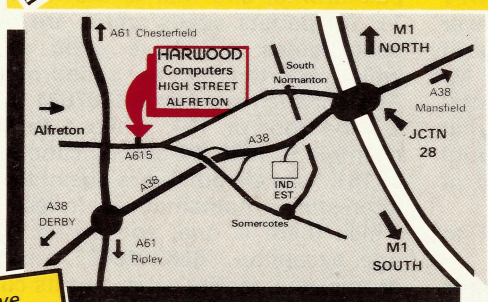
NEW!! *Commodore 1084S Stereo Monitors NOW IN STOCK!*

COMMODORE 1084S Stereo, 14" Colour
Suitable for AMIGA, C64, PC's, C16, +4 etc.
***£269**

PHILPS CM 8833 Stereo, 14" colour with Green Screen Switch
***£269**

Remember, the above monitors can be used as a TV if connected via a video recorder or using the Philips TV tuner available at only . . . **£69.95**

VISA Access **24HR ORDER HOTLINE 0773 836781**



Don't forget, we can supply any available product for an AMIGA/64/PC!

Please call and see us where we will be only too pleased to demonstrate the amazing Amiga in our showroom. Remember, we are not JUST another mail order company.

All prices are what YOU PAY, and there are NO HIDDEN EXTRAS. VAT & Postage are included and are correct at time of going to press.

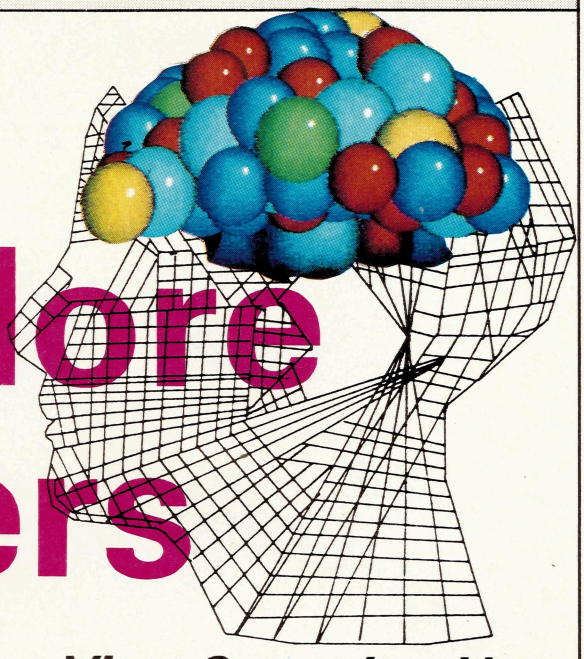
E.& O.E. Offers subject to availability and are currently advertised product(s).

GORDON HARWOOD
HARWOOD
HARWOOD
HARWOOD

Computers
OFFICIAL COMMODORE BUSINESS CENTRE

DEPT CCI
69-71 HIGH STREET · ALFRETON
DERBYSHIRE DE5 7DP

AI + Commodore Computers



Part VI — Summing Up

Peter Gerrard

FOR the last six months or so we have been considering the topic of artificial intelligence on Commodore computers, and illustrating our arguments and discussions with program listings. The majority of these listings have been concerned with the essence of A.I. — trying to teach the computer to think in a human kind of fashion. There is always a reasonable argument to be had along the lines of humans thinking artificially anyway, but in this, the final article in the series, we shall ignore that train of thought.

What I would like to do instead, before we round off our psychatrist program and play around with a few numbers and cover what else we might get to along the way, is thank those who have taken the trouble to write in. In particular, as the wonderful Eric Morecombe and Ernie Wise were wont to say, thanks to my fan Mr Mullowney of Cheshire (page 96 of the November 1988 issue of CCI, at the bottom of the middle column). Although there may be a gap of 37 years in our age at the time that you'll be reading this, the man says of me that "he's good, and he he knows that he's talking about," Splendid chap! I note that Cheshire is not too far away from The Shepherd's Arms in Lower Ince, Wigan, my local hostelry, so if you've ever out that way Mr Mullowney (or may I call you Jack?) ask for the bearded pool-plying computer man and he will no doubt eagerly extract the price of a pint of Tetley Bitter from your wallet.

But enough of this, and back to work.

In that self-name November issue we considered the topic of what were referred to as Hailstone numbers, and a set of rules governing whole positive numbers. There are many other areas that could be explored here, but at the end of this series on A.I. we shall consider just one; Palindromes. These are not, as fans of Jess Minter's excellent games might be forgiven for thinkings, a form of camel. By sticking to our objective of applying rules to a program, as we did with Hailstones, we can begin to study a very interesting branch of mathematics.

"Evil rats on no star live" as an example of a palindromic sentence. That is, one that reads the same forwards as it does backwards. Another more famous example concerns the emperor Napolean: "Able was I 'ere I saw Elba", a sentence that even manages to put the apostrophe in the correct place when it is reversed. But palindromes are not the exclusive right of the written word, numbers can equally as well be palindromic, and for the next few paragraphs we shall be looking at just that type of number.

Take, for example, the number 1331. This obviously reads the same whichever end we start from. Interestingly enough, the cube root of this palindromic number is itself a palindrome, and that is the number 11. All perfect cubes which are also palindromes will have cube roots which are themselves palindromes. Another such number is 1367631, with a cube root of 111, while a further example is 1030301 and its cube root of 101. I say all, but this is one of those interesting mathematical 'rules' to which there is one, and so far only one, exception, 10662526601, a palindrome, is a perfect cube, and its cube root is 2201, not a palindrome. Just one exception to the rule, but why should this be so? Are there other exceptions waiting to be found and, very important, will you be the person to find them?

We talked about finding exceptions when we discussed the numerical technique of hailstoning, a technique that applies certain rules to numbers in order for an end result to appear. It is not something that can be rigorously proved, it just so happens that for every number that has so far been examined, the rules hold and the end result always appears. Note that with both hailstoning and the topic that we'll be coming to in a moment we are always concerned with positive whole numbers.

"We can take the analogy one stage further: there is no strict mathematical proof stating that we can apply these rules to any positive whole number and end up with a palindrome, but we always seem to. I say seem, because there are numbers where there is room for doubt."

Take any positive whole number: 194 for example. Reverse the order of the digits and you get the number 491. Add those two numbers together and you have a total of 685. Reverse the digits in this new number and you get

586. Add the two (685 and 586) together once more and you arrive at a total of 1271. Apply the same rule for a third time to give us a number of 1721, add that to 1271, and we end up with the number 2992. This is, of course, a palindrome.

You might at first think that few numbers adhere to this rule, but I assure you that the number 194 was chosen totally at random. Well, almost! Read on and see why. Let's see what happens to the number 409. Reverse the digits to give us 904, add the two numbers up, and we have 1313. Reverse the digits again for 3131, add the numbers up once more, and we arrive at 4444. Once again, a palindromic number is the end result.

Even very large numbers do, eventually, return as a palindromic number. Take, for example, a starting point 55563. After 21 turns we reach the enormous number of 111675303576111. A palindrome at last. We could start with the number 998, and find that in 17 turns we have reached yet another palindrome: 133697796331. Just as with the hail-stoning technique there is no quick rule that we can apply to a starting number that will tell us exactly how it is going to behave. We can take the analogy one stage further; there is no strict mathematical proof stating that we can apply these rules to any positive whole number and end up with a palindrome, but we always seem to. I say seem, because there are numbers where there is room for doubt.

In order to explore such numbers we need to consult the computer, and the first of this month's listings does precisely that. However, there is a major flaw in dealing with enormous numbers on home computers. If we use only the Basic commands for manipulating such numbers we soon find that we have lost all accuracy and the results become meaningless.

But if the need is sufficient we can soon find a way around these problems, and in the listing we are working to an accuracy of one hundred digits. There is no reason why this accuracy cannot be increased to a thousand or more digits, but the computing time involved becomes prohibitive if we do so. The heart of this accuracy centres around lines 280 and 340 of the listing, and concerns itself with arrays a$, b$ and c$. The first is used to hold our original number, the second holds it in is re-arranged format, and the third holds the result of adding the first two numbers together. Thus if our starting number were 123, then the 98th element of a$ would hold the number 1, the 99th the number 2, and the

Persueing Palindromes

```
10 DIM a$(100),b$(100),c$(100),d$(100)
20 PRINT "[clr]"
30 FOR k=995 TO 1000:a=k:swop=0
40 FOR z=1 TO 100:a$(z)="":b$(z)="":c$(z
)="":NEXT:ok=FRE(0)
50 a$=MID$(STR$(a),2):l=LEN(a$)
60 FOR i=1 TO l:a$(101-i)=MID$(a$,l+1-i,
1):NEXT
70 FOR i=1 TO 100:IF a$(i)="" THEN NEXT
i
80 sar=i
90 FOR i=sar TO 100:b$(i)=a$(100-(i-sar)
):NEXT:GOSUB 280
100 FOR i=1 TO 100:IF c$(i)="" THEN NEXT
110 sar=i:IF c$(100)="0" THEN sar=sar-1
120 tp=101-sar:IF tp/2=INT(tp/2) THEN ts
=tp/2:GOTO 140
130 ts=INT(tp/2)
140 count=0:FOR i=1 TO ts
150 IF c$(sar+i-1)=c$(100+1-i) THEN coun
t=count+1
160 NEXT
170 IF count=ts THEN 190
180 FOR i=1 TO 100:a$(i)=c$(i):NEXT:GOTO
 70
190 PRINT
200 IF swop>hn THEN hn=swop:sn=a:FOR m=j
 TO 100:d$(m)=c$(m):NEXT:p=j
210 PRINT "Current starting no. ="a
220 PRINT "Number of turns      =";swop
230 PRINT "Highest no. of turns =";hn
240 PRINT "Starting number of   =";sn
250 PRINT "Max'm no. reached    = ";:FOR
 m=p TO 100:PRINT d$(m);:NEXT:PRINT
260 NEXT k
270 END
280 FOR z=1 TO 100:c$(z)="":NEXT z:swop=
swop+1:FOR j=100 TO 1 STEP -1
290 a1=VAL(a$(j)):b1=VAL(b$(j))
300 IF a$(j)="" AND b$(j)="" AND c2=0 TH
EN c$(j)="":GOTO 350
310 c1=0:c2=0:c1=a1+b1:IF c1>9 THEN tp=c
1:c2=1:c1=tp-10
320 IF c$(j)<>"" THEN a1=VAL(c$(j)):a1=a
1+c1:c1=a1:IF c1>9 THEN tp=c1:c2=1:c1=tp
-10
330 c$(j)=MID$(STR$(c1),2):c$(j-1)=MID$(
STR$(c2),2)
340 NEXT j
350 PRINT "[clr]New number          = "
;:FOR m=j TO 100:PRINT c$(m);:NEXT
360 PRINT:PRINT "Swaps              ="
;swop:RETURN
```

cont. on next page

continued from page 37

100th the number 1. The 98th, 99th and 100th elements of c$ would then contain the result of adding all this up, namely 4, 4 and 4. Lines 310 and 320 are the real key, and if you remember the rules of addition and the fact that we are, as always, working to a numeric base of 10, then you should have no trouble in understanding the techniques involved.

Once you have done so you might try changing the loop in line 30 so that a particular number comes into range. Try FOR k=190 TO 199. I stated earlier that 194 was chosen totally at random, almost! Watch number 196 and see what happens, and they you may care to try thousand digit accuracy in the quest for a number that doesn't obey our rules.

For something that does obey our rules, we'll wrap up the psychiatrist program with an interesting amendment. It is the fifth amendment to our original program, but despite that it bears no connection with America. I wanted to wrap things up with a SAVE and RESTORE section, so that one could continue talking to the computer from a given point without repeating the whole conversation to date, and that is indeed what we will be doing. It was while setting about the task that the interest was aroused.

"Like an adventure game, or role playing game, or any game that is sufficiently complicated to make saving progress worthwile, all we need to do is to find out the content of every variable that can be affected whilst the program is running and save all those variables to tape or disk."

Like an adventure game, or role playing game, or any game that is sufficiently complicated to make saving progress worthwhile, all we need to do it to find out the content of every variable that can be affected whilst the program is running and save all those variables to tape or disk. Or restore them, of course, if the reverse process is being carried out. If, incidentally, you're one of those people who has been adding to the program as we've been going along, you'll need to dig out every variable that you've used. The programs as published in CCI contain sixteen different variables that need saving, your own copy may well contain more, but the same techniques apply nevertheless.

The first thing that need be done is to alter line 18 so that it reads as shown in the "Eliza program — last touches" listing. A minor change that takes into account the 'patient', if we can continue to refer to such, typing in the words SAVE or RESTORE on their own. Those two words might well form part of a sentence, which is why we don't use the MID$ technique and study the entire input. They will only be acted on if they are typed in as the only word of a sentence, since it is extremely unlikely that either word would otherwise be used on its own in a meaningful conversation with the computer. Typing in either word takes us off to line 700, where a relatively straightforward piece of programming copes with something that is really quite interesting, and which brings us deep into the heart of A.I.

The programing, as I've said, is simplicity itself, although it would need altering slightly for a tape-based user. If we're saving, then line 755 makes use of the subroutine at line 780 to wait for the user to press the space bar when ready (which means when they've got a disk sitting in the drive), but if we're restoring then it's line 710 that takes us there indeed. From then on it's just a question of opening a file, and then trotting off to line 10 for another input from our patient. Note that there is no check in the restore section of things to see if a file already exists, but it might be worth putting one in if you were going to be sending a copy of your own version of the program to a friend. Just open a dummy file first and read in the system error variables in the time-honoured way, then check to see whether the file's there or not. EN seems to be the variable that everyone uses for Error Number when doing this, so you might as well stick with tradition. Provided all is well you can proceed to close the dummy file, open the real one, and read in the content of all the variables. It is those variables that we are interested in.

Sixteen of them, in total, and each one set or reset by something that has been typed in by the user. It is worth taking a brief look at each one in turn, because between them they could easily be used to tell us about the character of the user. As this is the last article in the series there will be no program additions in next month's issue, but a little sub-program could easily be added that would take a look at all the variables and issue some comment about the user. By this I mean add a line that checks for the word "Quite" (or "Exit", or whatever word you choose) so that the user can leave the program, then examine all the variables and allow the program to make full use of its A.I. qualities and give a summing up of the user.

The first one saved or restored is the variable BF. This is there if the user's sentence has begun with the word "because", he or she is being

Blitz program - last touches

```
18 NEXT k:IF cm$="save" OR cm$="restore"
 THEN 700

700 REM save or restore conversation
705 IF cm$="save" THEN 750
710 GOSUB 780
715 OPEN 2,8,2,"0:converse,s,r"
720 INPUT #1,bf,flag,mflag,tflag,self,m,
you,mn,tn,gc,here,tm,bt,se,ao,sm
725 CLOSE 2
730 GOTO 10
750 REM save conversation
755 GOSUB 780
760 OPEN 2,8,2,"@0:converse,s,w"
765 PRINT #1,bf,flag,mflag,tflag,self,m,
you,mn,tn,gc,here,tm,bt,se,ao,sm
770 CLOSE 2
775 GOTO 10
780 PRINT:PRINT"Press SPACE when ready"
782 GET a$:IF a$<>" " THEN 782
784 PRINT:RETURN
```

HARDWARE

COMPUTERS

Amiga A500 including Deluxe Paint and modulator.....£369.00
Amiga A500 including Deluxe Paint and modulator and Obliterator, Barbarian, Terrorpods, Eco,Wizzball.....£389.00
CBM 1084 S Colour Monitor or Phillips CM8833 colour monitor with above packs.....£259.00
CBM 64 Hollywood pack.....£149.00
CBM 64 Entertainment pack.....£199.00
CBM 1541 Mark II new disk drive.....£169.00

ACCESSORIES

3.5" DS/DD unbranded x 10 .....£12.00
3.5" SS/DD Sony x10.....£12.00
3.5" DS/DD Sony x10.....£16.00
IMB Cumana Disk Drive.....£95.00
Mouse Mat.....£4.50
5.25" DS/DD unbranded x 10 .....£5.99

PRINTERS

Citizen 120-D.....£139.00
Citizen 180-E £199.00
Star LC10.....£225.00
Star LC10 Colour.....£265.00
Juki 6000 Daisywheel.....£149.00

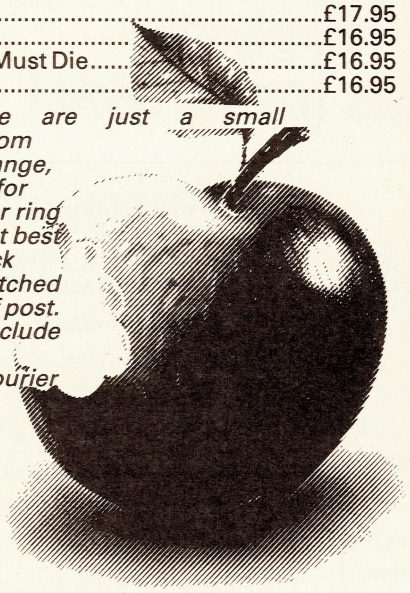
The whole Citizen Range stocked please ring for details

SOFTWARE

SOFTWARE

Battletech.....£17.95
Packmania £13.95
Outrun.....£16.95
International Soccer 13.95
F18 Interseptor.....£17.95
Starray £16.95
Fusion £17.95
Driller £16.95
Fernandez Must Die.....£16.95
Mena ce £16.95

The above are just a small selection from our huge range, please ask for catalogue or ring for details at best prices. Stock items dispatched by return of post. All prices include VAT and postage. Courier £6.00 extra.



Don't be tempted until you've had a byte at YORCOM.

OPEN 9AM TO 5.30PM MONDAY TO SATURDAY MAIL ORDER AND CREDIT CARDS WELCOME

YORCOM THE YORK COMPUTER CENTRE

THE YORK COMPUTER CENTRE 9 Davygate Centre York Y01 2SU Telephone (0904) 641862

commodore

FROM £395! AMIGA

Amiga A500 complete, now only	£395
Amiga A500 with TV modulator	£415
Amiga A500 with 1900M high-res mono monitor	£475
Amiga A500M with A1084 high-res colour monitor	£625
Amiga B2000 with 1MB RAM, 880K 3.5" disk, mouse, software	£999
Amiga B2000M As above, plus A1084 hi-res colour monitor	£1245
Amiga B2000 XTM As above, plus PC XT bridge board & floppy	£1725

Prices include 15% VAT, a FREE copy of DeLuxe Paint, FREE delivery to your door, one year warranty. Overnight delivery £12 All systems are tested before despatch. On-site maintenance option available.

PERIPHERALS AMIGA

512K plug-in RAM/clock (A500)	£105	A2088 PC-XT bridge board with 5.25" internal disk drive	£499
A1081 high-res colour monitor	£225	A2092PC 20MB internal hard disk with MS DOS controller	£525
A1084 high-res colour monitor	£249	A2092A 20MB internal hard disk with Amiga DOS controller	£625
1900M high-res mono monitor	£89	Supra hard disks 20MB - 250MB	Call
A1010 3.5" external disk drive	£185	A2052 2MB internal RAM card	£399
Cumana 3.5" external disk drive	£129	Citizen 120D 120 cps, F/T, NLQ	£175
NEC internal drive (2000 only)	£129	Star LC10 120 cps, F/T, NLQ	£215
A2010 internal drive (2000 only)	£175	Star LC10 as above, colour	£245
Genlock B2000 video controller	£225	Precision printer 480 cps, NLQ	£399
		Canon PJ1080A colour, 80 dpi	£499
		Xerox 4020 colour, 240 dpi	£1125
		HP LaserJet laser, 300 dpi	£1995

CREATIVITY AMIGA

	De Luxe Paint II (PAL)	£59.95
	DigiPaint 4096 colours	49.95
	De Luxe Music (PAL)	59.95
	Page Setter	94.95
	City Desk	89.95
	Animator Apprentice	179.95
The Works	Analyze + Organize + Scribble, integrated desktop	99.95
ProWrite (V2.0)	Wordprocessing fully integrated with graphics	79.95
VizaWrite Desktop	High performance desktop publishing wordprocessor	69.95
Word Perfect	Amiga version of the No.1 best selling wordprocessor	199.95
Publisher Plus	Enhanced version of the original desktop publisher	99.95
Flow	The Idea Processor from New Horizons Software	49.95
PixMate	Professional image enhancement straight from NASA!	44.95
Prism Plus	4096 HAM colour paint pack 1024 x 1024 (needs 1MB)	54.95
Calligrapher	Professional font editor, fonts up to 160 x 256 pixels	74.95
De Luxe Video II	Create all types of video presentations with ease	59.95
Aegis VideoScape	Full 3D animations in all resolutions with overscan	124.95
Pro-Video CGI	Professional video titler with fonts, extra fonts available	159.95
Aegis Animator	Full storyboarding package, includes Aegis Images	94.95
TV Show	PAL Image presentation in IFF or HAM with overscan	89.95
DigiPic	Fast frame-grabber, 32 colours or grey scale	299.95
Art of Chess	The best Amiga chess yet, packed with features	15.95

PRODUCTIVITY AMIGA

	SAM Basic	£89.95
	A/C Basic	154.95
	A/C Fortran	229.95
	Lattice C 4.0	124.95
	Lattice C Professional	299.95
	MCC Pascal	69.95
64 Emulator	Use your C64 programs and files! Includes cable	59.95
PC Emulator	The Transformer (MS-DOS not supplied)	39.95
SuperBase Personal	Relational database power, without programming!	69.95
SuperBase Professional	With Forms Editor and DML program language	224.95
Acquisition (V1.3)	Relational database with programming language	199.95
Maxiplan 500	Ultimate Amiga spreadsheet, + text/graphics/speech	89.95
Maxiplan Plus	As Maxiplan 500 above, plus powerful Macro language	129.95
VIP Professional	1-2-3 compatible spreadsheet + database & graphs	99.95
Logistix	2048 x 1024 spreadsheet, database, graphs & calendar	99.95
Businessware Pack 1	Invoicing, Sales Ledger, Stock Control, by Panmead	159.95
Businessware Pack 2	General Ledger, Purchase Ledger, by Panmead	159.95
Intro Cad	Entry level CAD package, printer or plotter output	54.95
Aegis Draw Plus	Comprehensive CAD with multiple layers & windows	139.95
X-Cad	Professional CAD system (needs 2MB)	424.95
MCC Assembler	Professional development system with linker & libraries	59.95

128

		Commodore 128D	£399
		Commodore 128	225
		NEW 1581 disk drive 3.5"	199
		Commodore 1571 disk drive	199
		Commodore 1541C disk drive	125
		1900M 40/80 mono monitor	89
SuperBase 128	£29.95	VizaWrite 128 Classic	59.95
SuperBase 64 & Plus/4	24.95	VizaWrite 64 (disk)	39.95
SuperBase: The Book	11.95	VizaWrite 64 (cartridge)	49.95
SuperBase Starter 64	14.95	VizaStar 128	79.95
SuperScript 128	29.95	VizaStar 64 XL8	59.95
SuperScript 64	24.95	VizaStar 64 XL4	49.95
PetSpeed	Oxford Systems' best selling Basic compiler (state 64/128)		19.95
Oxford Pascal	Complete J & W Pascal, with extensions (state 64/128)		19.95
Oxford Pascal 64 (tape)	As above, for C64 tape users		19.95
Cobol	Complete COBOL package from Abacus (state 64/128)		29.95
Super C	Complete C language to K & R standard (state 64/128)		39.95
Hack Pack	All-in-one programmer's Toolkit/Ram-disk (state 64/128)		19.95
Oxford Basic 64	All-in-one Basic compiler, Toolkit, compressor		19.95
1750 Expansion RAM	512K Expansion RAM cartridge for the C128		149.95
RamDos 128	Lightning-fast RAM-disk for 512K expansion RAM		29.95
1764 Expansion RAM	256K Expansion RAM cartridge for the C64		99.95
Anatomy of the 128	The 500-page insider's guide to the 128		9.95

IF YOU WANT IT TOMORROW... CALL US TODAY! ON 0483 - 504125

Prices are POST FREE & include VAT. Order by phone with your credit card, or send cheque/PO or your credit card number. Official orders welcome. We despatch same day by FIRST CLASS post. Please allow 5 days for delivery of hardware orders. Prices quoted are subject to availability. Ref. A57

Access VISA

Calco Software

LAKESIDE HOUSE, KINGSTON HILL, SURREY, KT2 7QT. TEL 01-546-7256

continued from page 38

affirmative and possibly slightly argumentative in trying to get a point over. The next three variables are FLAG, MFLAG or TFLAG, used to denote a conversation drifting into the realms of mothers, money and technology. An interest in any or all of these could easily be noted by a program. We then reach the variables SELF, M and YOU, which respectively inform us that the user is discussing themself, mother again, and the computer. Another three points of interest about the person at the other end of the keyboard from the computer.

MN, TN and 6C follow on from there, indicating the user talking about money, technology or just indulging in general conversation. Taken in conjunction with the variables already seen we can begin to build up a true representation of the user's interests. Or at least, those things they might talk to a computer about. If you have added your own sections to the program, then you could include those as well, giving an even more accurate portrait.

HERE is a useful variable, which shows us that the user is trying to hide something. Not fully discussing it, in other words. TM comes next, the patient is obsessed with money, and skipping three we get to SM, which indicates that the patient is showing some emotion at last and beginning to open up. The presence or absence of this variable being set could be used to tell us quite a bit about our patient. It use could be expanded somewhat, thinking about it.

That leaves us with three variables that we've so far not considered, but that is because they need to be treated as a threesome. SE tells us the sex of the patient, BT tells us that they have broached the topic of sex, and AO confirms to us their interest in the topic by telling us that this is not the first time that sex has been mentioned.

And you thought that you were just typing in response to a computer program's prompting. Those sixteen variables reveal quite a bit about whoever's using the program, perhaps more than anyone might have realised when this series first started, and with your own additions to the program as well you could begin to build up quite an exhaustive portrait of the person you've given the program to. If they're too shy to save the conversation to disk, you could always ensure that when they Quit or Exit the program automatically does that itself.

And that, faithful readers, is the end of my involvement with the Eliza program as a stand-alone Basic program. Over the last eighteen months I have covered three distinct topics on Commodore computers. We started off with arcade games, and a collection of programs for scrolling the screen and building up a large map that could be moved left, right, up or down, as the needs of the game dictated. We then looked at adventure games, discussing many topics withn that genre, solving, writing, publishing, etcetera, with insights into the playing of that particular type of game. We have now come to the end of a six month excursion into artificial intelligence. These topics reflect my own interests in programming activities at the time of starting them, and my current interest is one that covers all three of them, arcade, adventure, and artificial intelligence alike.

Many of you will have read Croftward's (yes, they publish CCI as well!) magazine, GM, devoted to the world of Role Playing Games, an increasingly important sector of the game market. That is the subject that will occupy my next series of articles for this magazine. We have dealt with the three "A"s of arcade, adventure and artificial intelligence. Now we shall combine them all and move on to the first "R": Role Playing.

P.G.

Eazyprint

Telephone:
Staines (0784) 66744

Access 24-Hour Order Hotline:
(0932) 781257

See us at the forthcoming Commodore User Show, November 18th-21st.
Stand #126
Visit our stand for all your Amiga & PC requirements.

All prices include VAT. This is just a small selection of our Amiga hardware and software. Please call for our current catalogue - (0784) 66744

SOFTWARE

AEGIS

Lights, Camera, *Action!* 52.00 Sonix 52.00 Audiomaster 35.50 Diga! 50.60 Draw 161.00 VideoScape 138.00

ELECTRONIC ARTS

Deluxe Paint II 52.04 Deluxe Print II 49.86 Deluxe Photolab 49.86 Deluxe Productions 104.12 Deluxe Video 52.04 FA18 Intereceptor 21.95 Fusion 21.95

OTHERS

Professional Page 285.66 Lattice C 4.0 140.88 Futuresound 158.98 Marauder II 33.93 WordPerfect 201.25 Flight Simulator II 40.25 Comic Setter 63.00 Photon Paint 63.00 Pagesetter 72.00.

HARDWARE

Amiga A500 inc. Deluxe Paint 360.00 inc.VAT
A500 + Modulator 382.93
1084 Monitor 241.50
1084S *Stereo* Monitor 276.00
A500 + 1084 609.50
A500 + 1084S 638.25
A501 512k RAM 132.25
A520 TV Modulator 24.45
RF302C 3.5" Disk Drive 89.99
MPS1200P Printer 149.45
LC10 Colour Printer 284.72
Amiga B2000 1150.00
B2000 + 1084 Monitor 1388.50
B2000 + 1084 Stereo 1400.00
A2052 B2000 2Mb RAM 354.00
B2000 XT Bridgeboard 300.00
B2000 Internal Drive 146.83

EAZYPRINT, Northumberland House, Gresham Road, Staines, Middlesex. TW18 2AP. Fax : (0784) 50845. Telex : 924707 ACTION

MARIA'S CCI XMAS BOX

WE'VE got a real special competition for you this issue. Thanks to Cill of Anco and of course Anil Anco's boss for the brilliant idea) Maria Whittaker of Page 3 fame is offering to give you a very attractive and personal Christmas Box. Anco, well-known already for their Strip Poker series of computer games, have persuaded the famous and very well-endowed Maria to pose for a new Strip Poker games called (yes, you guessed it!) "Maria's Christmas Box". Anco's Gill who very valiantly watched through the whole photo session (We tried for an invite but so did 5000 other computer magazines too!) says that Maria is a very nice girl. We are sure she is . . . She has such pleasant attributes . . . Anco and Maria are giving CCI readers some great prizes including personally signed photos of Maria and copies of the Strip Poker game on the 64. (You will have to buy an Amiga and Amiga User International Magazine on for the even more explicit, from the technological sense, of course, version).

The first prize is . . .

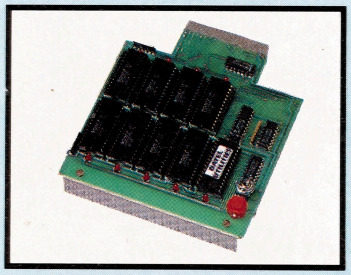
The 20 Runners Up will get signed photographs of Maria and copies of the 64 version of the game.

All you have to do is tell us:

1. **What is the top hand in straight poker?**
2. **How many "picture cards" are there in a normal pack?**
3. **What is "bluffing" in poker?**
4. **How old do you think Maria Whittaker is?**
5. **What is the meaning of the expression "poker face"?**

Answers on a postcard to:
Anco's Maria Competition, c/o CCI,
40 Bowling Green Lane, London EC1R ONE
Entries should reach us by
February 15th, 1989

DATEL ELECTRONICS



256K SUPEROM EXPANDER

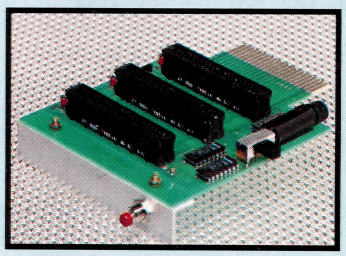
- ❑ Select instantly from 8 sockets which accept up to 32K EPROM each.
- ❑ Program your own EPROMs using our EPROM programer.
- ❑ No need to have lots of cartridges - just make a selection from the Superom menu.
- ❑ Fully menu driven on power up.
- ❑ Select any slot under software controls.
- ❑ Unique EPROM generator feature will take your own programs - basic or m/c & turn them into autostart EPROMs. (EPROM burner required).
- ❑ Accepts 2764/27128/27256 EPROMs.
- ❑ On board unstoppable reset.
- ❑ On board operating systems - no programs to load.

ONLY £29.99

RESET CARTRIDGE

- ❑ Unstoppable reset button. NOTE:- user port cheaper type reset buttons offered by others are not unstoppable.
- ❑ Resets even so called "unstoppable" programs.
- ❑ Add pokes from magazines etc.
- ❑ Fits in cartridge port.
- ❑ Simply plug in.

ONLY £5.99

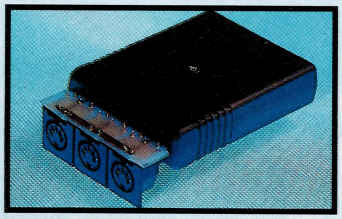


3 SLOT MOTHERBOARD

SAVE WEAR & TEAR ON YOUR EXPANSION PORT

- ❑ Accepts 3 cartridges.
- ❑ Switch in/out any slot.
- ❑ Onboard safety fuse.
- ❑ Fully buffered.
- ❑ High grade PCB.
- ❑ Reset button.

ONLY £16.99



MIDI 64

FULL MIDI INTERFACE FOR THE 64/128 AT A REALISTIC PRICE.

- ❑ MIDI in/MIDI thru/2 x MIDI out.
- ❑ Compatible with most leading software packages.

ONLY £29.99

DIGITAL SOUND SAMPLER

- ❑ The new sampler allows you to record any sound digitally into memory & then replay it with astounding effects.
- ❑ Playback forwards/backwards with echo/reverb/ring modulation.
- ❑ Now with full sound editing module to produce outstanding effects.
- ❑ Full 8 bit D to A & ADC conversion.
- ❑ MIDI compatible with suitable interface. (i.e. Datel unit for £29.99, see ad.).
- ❑ Live effects menu includes real time display of waveforms.
- ❑ Line in/mic in/line out/feedback controls.
- ❑ Powerfull sequencer with editing features.
- ❑ Load/save sample.
- ❑ Up to 8 samples in memory at one time.
- ❑ Tape or disk (please state).
- ❑ Complete software/hardware package.

ONLY £49.99

COM-DRUM

DIGITAL DRUM SYSTEM

- ❑ Now you can turn your digital sound sampler into a digital drum system.
- ❑ 8 digital drum sounds in memory at one time.
- ❑ Complete with 3 drum kits.
- ❑ Real drum sounds - not synthesised.
- ❑ Create superb drum rhythms with real & step time.
- ❑ Full editing. Menu driven.
- ❑ Output to hi-fi or through TV speaker.
- ❑ Load/save facilities.

ONLY £9.99
STATE TAPE OR DISK

COM-DRUM EDITOR

- ❑ 24 drum sounds supplied on disk to enable you to construct your own drum kit.
- ❑ Re-arrange sounds supplied with a Com-Drum to make new kits.
- ❑ Load/save facilities.

ONLY £4.99 DISK ONLY

DATA RECORDER

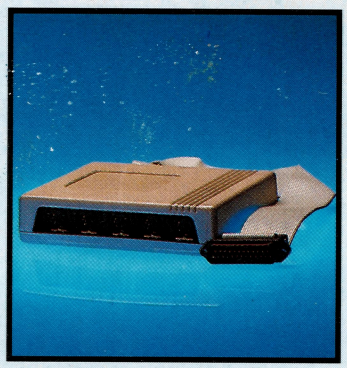
- ❑ Quality Commodore compatible data recorder.
- ❑ Pause control, counter, etc.
- ❑ Suitable for 64/128
- ❑ Send now for quick delivery.

ONLY £24.99

DEEP SCAN BURST NIBBLER™

- ❑ The most powerfull disk nibbler available anywhere, at any price! Burst Nibbler is actually a two part system - a software package & a parallel cable to connect the 1541/ 1570/1571 to 64/128 (state type).
- ❑ What gives Burst Nibbler it's power? Conventional nibblers have to decode the data from the disk before it can transfer it using the serial bus - when non standard data is encountered they are beat. Burst Nibbler transfers data as raw GCR code via the parallel cable without the need to decode it so you get a perfect copy of the original.
- ❑ ● Will nibble up to 41 tracks ● Copy a whole disk in under 2 minutes ● Full instructions ● Regular updates - we always ship the latest ● Fitted in minutes - no soldering usually required ● Full or 1/2 tracks ● No need to buy parallel cable if you have Disk Demon/Dolphin etc. ● Cable has throughbus extension for other add ons.
- ❑ Wether to choose FastHack'em or Burst Nibbler? Fast Hack'em is unbeatable value as an "all rounder" - with nibblers, 1 or 2 drive copy, format, file copy, 1571 copy etc. etc., so if you have a more general requirement perhaps Fast Hack'em is for you. Burst Nibbler is a pure nibbler second to none, for the reasons stated. So if it's just making backups you are interested in, there is no other product to beat it!

ONLY £24.99 COMPLETE
SOFTWARE ONLY £12.99
CABLE ONLY £14.99



ROBOTEK 64

MODEL & ROBOT CONTROL MADE EASY.

- ❑ 4 output channels - each with onboard relay.
- ❑ 4 input channels - each fully buffered TTL level sensing.
- ❑ Analogue input with full 8 bit conversion.
- ❑ Voice input for voice control.
- ❑ Software features:- test mode/ analogue measurement/voice activate/digital readout etc.

ONLY £39.99
INCLUDING HARDWARE/SOFTWARE/ MIC. ETC,(STATE TAPE OR DISK).

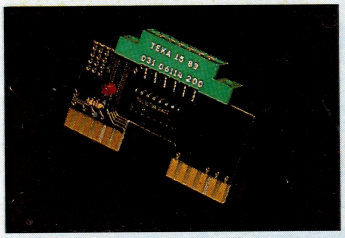
TOOLKIT IV

THE ULTIMATE DISK TOOLKIT FOR THE 1540/1541.

- ❑ A disk toolkit is an absolute must for the serious disk hacker. Toolkit IV has more features than most for less.
- ❑ DISC DOCTOR V2 - Read & write any track & sector including extra & renumbered tracks. Repair damaged sectors. Look underneath read errors.
- ❑ HEADER/GAP EDITOR - Decodes & displays ALL header information including off bytes & header gap. Rewrite the entire header & header gap. Renumber sectors. Also edit any sector tail gap.
- ❑ DISK LOOK - Sort directory. Recover lost files. Display file start /end addresses. Disassemble any file program directly from the disk to SCREEN or PRINTER including undocumented opcodes. Edit Bam.
- ❑ FILE COMPACTOR - Can compact machine programs by up to 50%. Save disk space. Compacted programs run as normal.
- ❑ FAST DISK COPY - Copy an entire disk in 2 minutes or less using single 1541.
- ❑ FAST FILE COPY - Selective file copy. Works at up to 6 times normal speed.
- ❑ FORMATTER - 10 second format an entire disk or format any individual track or half track 0 to 41. Re-define any of 30 parameters to create or recreate unique disk formats.
- ❑ ERROR EDIT - Quickly find & recreate all read errors including extras & renumbered tracks or sectors & half tracks from 0 to 41. Even recreates data under errors & allows you to redefine any necessary parameters.

ONLY £9.99

DATEL ELECTRONICS



NEW CLONEMASTER

- The most effective tape to tape back-up board available.
- Makes perfect backups of your tapes easily & effectively!!
- No user knowledge needed at all.
- On board TTL logic circuitry actually shapes the program & sends a perfect signal to the record cassette - producing a copy better than the origional in many cases.
- L.E.D. indicator shows when data is being transferred to avoid exessive tape winding.
- Works with almost any program including multi-loaders, turbos & even very unusual type turbos.
- Requires access to two CBM compatible data recorders.
- Simply press 'Play" on one recorder & press 'Record' on the other - that's it!
- You can even make a backup while you are loading the program.
- This is a total hardware solution - no programs to load - the results are stunning!

ONLY £9.99

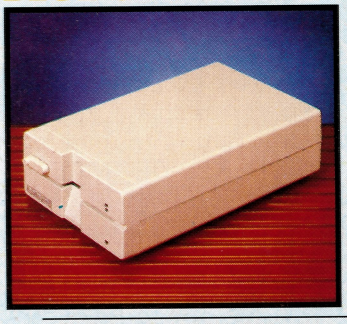
TURBO ROM II

TURBO ROM II IS A REPLACEMENT FOR THE ACTUAL KERNAL INSIDE YOUR 64. IT PROVIDES SUPERFAST LOAD/SAVE ROUTINES.

- Loads most programs at 5-6 times normal speed.
- Saves at 5-6 times normal speed as well.
- Improved DOS support including 10 sec. format.
- Programed function keys:- load, directory, old, etc.
- Return to normal kernal at a flick of a switch.
- FCOPY-250 block file copier.
- FLOAD-special I/O loader.
- Plus lots more.
- Fitted in minutes - no soldering usuallly required. (On some 64's the old ROM may have to be desoldered).

ONLY £14.99

BLUE CHIP DRIVE



- External power supply for cool operation.
- Even works in 1571 double sided mode (128 mode).
- Fully C64/128 compatible.
- This drive is now probably the most compatible drive available for the Commodore. More so than even Commodores own '1541C'.
- Supplied complete with all cables - no more to buy.
- At last, a top quality drive at a sensible price.

ONLY £129.99

ADD £5.00 FOR COURIER DELIVERY

ULTRA CRUNCHER

- The ultimate cartridge based program compactor.
- Compacts by up to 30%!
- 3 compacting programs on one cartridge.
- Fast loading/saving routines.
- Full DOS support including fast format.

ONLY £12.99 on cartridge

Available as chip only for 256K Superom Board for

ONLY £7.99

FAST HACK'EM ™

- Multi Module Disk Nibbler - all on one disk.
- Single 1541 Nibbler - Copy a disk in 2 minutes.
- Super fast File Copy - under 9 seconds typically.
- Plus unique "Parameters" mode. These files "unlock" the more heavily protected programs with a parameter for a particular brand or even single program.
- No other product is such a good "All Rounder" at this price...

ONLY £9.99

SMART CART

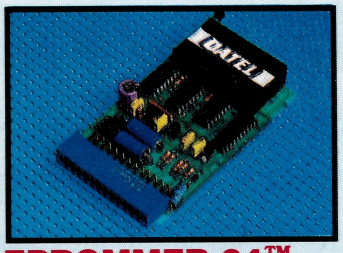
- 32K pseudo ROM.
- Lithium battery lasts up to 5 years.
- Simply load the program you require - then flick the switch. The cartridge can then be removed just like a ROM cartridge.
- Make your own cartridges including autostart types - without EPROM burner. 32K version = 4 x 8K pages.
- Some knowledge of M/C is helpful - but full instructions included.
- I/O 2 slot open for special programing techniques.

ONLY £29.99

RAM DISK

- Turn your Smart Cart into a 32K Ram/disk.
- 32K of instant storage area for files/programs.
- Disk type commands:- load, save, directory, scratch.
- Program data retained when computer is switched off!
- Full command set with instructions.

ONLY £9.99



EPROMMER 64™

- A top quality, easy-to-use EPROM programer for the 64/128.
- Fully menu driven software/ hardware package makes programing/reading/verifying/ copying EPROMs simplicity itself.
- Will program 2716, 2764, 27128 & 27256 chips, 12.5, 21 or 25 volts.
- Fits into user port for maximum compatibility with cartridges/ Superom Board etc.
- Full feature system - all functions covered like device check/verify.
- We believe Eprommer 64 is the most comprehensive, most friendly & best value for money programer available for the 64/128.
- Ideal companion for Superom Board, Cartridge Development System, our kernal expanders or indeed any EPROM base project.
- Comes complete with instructions - plus the cartridge handbook.

ONLY £39.99
COMPLETE

ROBOTARM

- Explore the facinating science of Robotics with this full feature RobotArm.
- Human like dexterity - with 5 axis of movement it is so versatile. It can manipulate small objects with amazing ability.
- Comes with Accesories including 'Finger' Jaws, Magnetic Attachment, Shovel Scoop, 4 Stabilizing Suction Legs, etc.
- Easily controlled using 2 joysticks (any 9 pin type) or connected to your computer with our Interface/ Software to give Computer/Robotic control (see Interface Offer).
- Uses 4 HP2 batteries (not supplied) to power motor movement so uses no computer power.
- Self contained, ready to use (except batteries, joysticks).

ONLY £49.99

INTERFACE OFFER

- Unique Software/Hardware package to allow you to interface your computer with the Robotarm.
- Train mode allows you to store & then repeat movement sequences.
- Very easy to use.
- This interface isn't needed to use the Robotarm but interfacing with your computer has great possibilities.

ONLY £24.99
COMPLETE WITH CABLES

ALL ORDERS NORMALLY DESPATCHED WITHIN 48 HRS

HOW TO ORDER ...

BY PHONE	BY POST	FAX
0782 744707 24hr Credit Card Line	Send cheques/POs made payable to "Datel Electronics"	0782 744292 UK ORDERS POST FREE EUROPE ADD £1 OVERSEAS ADD £3

PRICES AND SPECIFICATIONS CORRECT AT TIME OF PRESS AND SUBJECT TO CHANGE WITHOUT NOTICE

CALLERS WELCOME - Please reserve goods by telephone prior to visit.

DATEL ELECTRONICS

DATEL ELECTRONICS LTD., FENTON INDUSTRIAL ESTATE
GOVAN ROAD, FENTON, STOKE-ON-TRENT, ENGLAND.

SALES ONLY	TECHNICAL ONLY
0782 744707	0782 744324

EPYX FAST LOAD

Nigel Streeter finds a plain and simple fastloader from an unusual source.

This is not really a review, more of a re-visit! The Epyx Fast Load Cartridge has been around for quite a few years now and is still available through US Gold. Epyx are better known for their marvellous multiple games than for utilities or peripherals. Nevertheless they do their reputation no harm with this product.

In these days of "let's see what else we can cram into a cartridge to make it better than the rest', it's almost like a breath of fresh air to plug one in that, on turning the computer on, presents you with just one word: **"Fastload"!**

At this point you are able to list the directory without erasing the program in memory, load and run a program using the Commodore an Run/Stop keys together, load and save files, send disk commands and read the disk error channel.

Pressing the "£" key will take you to a menu of six Disk Tool options. The obvious ones being: Directory, Return to Basic and Disable Fastload. The others are: Copy, Edit Diskette and File Utility.

Selecting the "Copy" option allows you to format or copy a disk, copy individual files or do a BAM copy. BAM is the **Block Availability Map"** stored on the disk by the Disk Operating System, and is simply a checklist of all the blocks on the disk. Every time a file is saved or erased, the BAM is updated. All a BAM copy does is to copy those blocks that are allocated. This is much faster than copying the entire disk.

The **"Edit Disk"** option takes you into a very basic and simple Disk Editor that allows you to read, edit and write individual sectors on the disk.

"File Utility" brings up another menu where you can elect a copy or delete a file, change the name of a file, "lock" a file (thus making it impossible to delete), or "unlock" a previously "locked" file.

Apart from the above mentioned disk tools, the Fast Load Cartridge also contains a pretty decent machine code monitor, called SMON. Pressing "!" enters the monitor, which will accept input in HEX, DECIMAL or ASCII. All the usual commands are here for manipulating machine code including loading and saving, disassembling, moving, re-locating and executing. Plus a few of the more unexected commands like disassembly printing indirects or absolute and zero page references, or execution of code with register display after each instruction. And a number converter to HEX, DECIMAL, BINARY and ASCII.

The Epyx Fast Load Cartridge doesn't pretend to be anything that it is not. It cannot possibly compete with some of the more modern all-singing all-dancing cartridges but, if you want a plain and simple cartridge that will speed up the loading from your 1541 Hippopotamus, with a few very useful utilities thrown in, then you will probably be quite satisfied with this one.

Price: £24.99 ***N.S.***

MIDNIGHT ASSEMBLY SYSTEM

Bob Collyer takes a critical look at a 128 version of a 64 favourite.

Mountain Wizardry Software from the States have come up with a new 128 version of their popular 64 Midnight Assembly System. Some of the special features of MAS 128 include the ability to execute from RAM 0 or RAM 1, generating code into the opposite Bank of memory. You also have the ability to generate code into a slave 64 or 128 via a cable. No ROM routines are called at all. This could allow you to develop your own customised ROM replacements. Something which I imagine could lead on to a host of new ideas and inventions by altering the internal ROM routines.

MAS contains its own built in 1700/1750 RAMDOS. Text entry is free format allowing multiple statements per line of text, the editing system is full screen as you would expect with such a comprehensive assembler.

The disk itself is not autobooting, a helpful feature as most programmers are always hitting the reset button. MAS 128 runs in 80 columns and has a handy HELP file called up by pressing the HELP key. With this help one can quickly become familiar with the working immediate commands and some of the pseudo-opcodes.

BNK immediate command (not to be confused with the basic command) selects the memory configuration. This specifies the value to be stored in $FF00. For example BNK$3F selects RAM 0 or BNK$7F selects RAM 1. You would use this command in conjunction wth the JSR and DUMP commands, this means that it becomes possible to swap around the usual system of MAS 128 from one bank to another.

CMD displays a list of commands currently implemented by MAS 128. Some of the commands listed are reserved for personalised customisation and may be implemented by the technically-advanced user plugging the address of his own subroutine into the Immediate Command Vector Table. For example, the 3 letter immediate commands NOP and USR are left open for definition by the user, just one more good idea to come out of this package. It is even possible to adjust the screen output by changing the colour, rows, screen, attributes and vertical fine adjust.

These immediate commands are the more notable improvements overs its predecessor the 64 Midnight Assembly System which in its own right is a very good symbolic assembler. They both employ the usual two pass method of assembly, all files are prefixed with the date they were created. Symbolic labels can be up to 100 bytes long, unique by colour, supporting both upper and lower case, numeric or graphic characters. Automatic line numbering, renumbering, moving, copying swapping or deleting make programming a complete breeze.

Thirty two pseudo-opcodes from the original assembler are enhanced in this 128 version by the inclusion of four more pseudo-ops to enlarge the flexibility of programming with the Midnight Assembly System.

Conversion of different file structures are catered for. You can convert your old assembler files to MAS with several different conversion commands. Source files from PAL, MAE CBM ASM, generic PETASCII, ASC or USA ASCII can be handled. You should be aware though translating source files to MAS structure will entail at least some, and occasionally, lots of rewriting in order to maximise the power of the MAS assembly language.

The numeric keypad can be utilised as user definable function-keys by pressing *shift* and a numeric key. For example, Key 1 "M. Montchalin" defines numeric key 1 with the name of the author of MAS 128. Rather you can program this key with something else you will use more often.

The system handles extensive disk support, fast loading with 1571/1581 drives. A well documented copious manual containing over 300 pages! All these things add up to make a great improvement over the original.

On the disk there are a couple of demo programs. A music demo and an animated graphic swirling sprites demo. Both of which you can read or load/assemble and run. It is easy to edit the demos, a handy way in which to muck around with the code and learn MAS assembly language. I found the Midnight Assembly System for the 128 to be a very versatile system, complete in many ways, and the old 64 MAS system comes of age.

B.C.

Contact: Financial Systems Software Ltd, High Street, Pershore, Worcester
Tel: 0386 553153
Price: £14.95

'The Player Of Games'

by Iain M. Banks (Macmillan £11.95)

Despite the proliferation of computer games the old conventional board games still seem as popular as ever. In 'The Player Of Games' takes board game playing to its ultimate peak for on the result of the final depends not only the fate of men but also of their planet.

The hero, Jurnau Gurgeh, is the acknowledged master of games-playing in the 'Culture', a world — eleven milleniums hence — which appears to be almost Utopian. No crime, violence, war or greed. Its inhabitants can change sex at will ('Don't look now but is that John or Jean?'), grow new parts when the old bits degenerate and even manufacture drugs of all kinds, within their own bodies, without peril to themselves (Just like Ben Johnson!). Life is lived in he pursuit of happiness.

Gurgeh's main pleasure is the playing of all kinds of games. He's a kind of games grand-master but, unfortunately, he's bored. There is no-one in the Culture who can beat him or with whom he can match wits or expertise, although many try. Then he is told of the 'Empire', a world where all governmental jobs rely on how good a player one is at an extremely complicated game called 'Azad'. Once every six years the ruling class — which consists of three sexes, male, female and apex — compete to discover who will be pro-or-demoted and the ultimate winner becomes ruler over all. The game can be played singly or with partners and the various stages cultimate in a Grand Final which takes place on another planet which is constantly consumed by fire. The only drawback, apart from the danger of getting quick-fried, is that to reach the 'Empire' and then return takes five years and Gurgeh does not feel inclined to leave his own world for that long.

Here I must mention the drones. They are small, saucer-like, infinitely intelligent, 'servants-cum-companions' to Culture inhabitants. In addition they also protect the planet from any potential enemies. Drones are not robots, although they are not human, either, but they do have remarkably human characteristics occasionally. They have a sense of humour, can sulk and even bear malice for real or imagined slights.

During the course of a game Jurnau Gurgeh is persuaded to cheat, as an experiment, by a conniving drone who later blackmails him into goir g to the Empire. What he doesn't know is that the Culture has set it all up because they fear that the Empire will get to know too much about them, become envious and want to take them over. If Gurgeh can compete in the Azad championships, and win, the threat of this will be negated.

The tension of 'The Player Of Games' is generated by the fact not only is the reader kept continually wondering whether Gurgeh WILL win, for there are several times when this is seriously in doubt, but in what will happen when — and if — he does. For the twists and turns in the plot are as complicated as the game of 'Azad' itself.

Gurgeh is a complex, but always intriguing character. Iain M. Banks succeeds in drawing a portrait of a man who is at once ever in search of new experiences but who has an inborn reluctance to change the status quo. And the drone who is his companion during the time spent on the Empire's planet seems almost to be a kind of coic relief, a Sancho Panza to Gurgeh's Don Quixote — or is he?

Iain M. Banks' other novels include 'The Wasp Factory' a best-seller which was a very compelling story. 'The Player Of Games', too, is one that deserves to become top of the league.

D.M.

'A Brief History of Time'

Stephen W. Hawking (Bantam Press £14.95)

Stephen W. Hawking has three claims to fame. He is one of the world's leading cosmologists, he is widely regarded as the most brilliant theoretical physicist since Einstein and, for the last twenty years he has continued his work on mathematics whilst confined to a wheelchair suffering from motor-neuron disease, (the same disabling disease that eventually killed film-star David Niven).

'A Brief History of Time', has been written with the help of three assistants, four secretaries, a team of nurses, a personal computer and a speech synthesizer. The last named was donated by a firm called Speech Plus, based in California, because while writing the book Stepehn Hawking caught pneumonia which necessitated his having a tracheostomy, this removed his ability to speak and made it almost impossible for him to communicate until the synthesizer came along.

It seems incredible that someone so physically disabled as is this Professor of Lucasian Mathematics at Cambridge University, (a post once held by Isaac Newton), can not only carry on with his work at the University but could have even attempted to write a book that sets out to explain, in plain language, the 'basic ideas about the origin and fate of the universe that ... people without a scientific education can understand'.

Has he succeeded? Well, the book has been at the top of the best-sellers list almost from the day it was published, which must say something.

Even one as dumb as I have physics could understand most of what he was explaining, even if I did have to read and re-read many of the paragraphs several times before the information they contained sank in.

'A Brief History of Time' has the sub-title 'From The Big Bang to Black Holes' and that says it all. Professor Hawking takes us from Einstein's general theory of relativity which predicted that space-time — or the universe as we know it — began with the big bang, (nothing to do with the recent stock-market contretemps of the same name!), and would come to an end either with a big crunch, in which the whole universe would collapse, or would disappear inside a black hole, (which is another name for a collapsed star), to his own theories about the same subjects.

On the way he goes into — amongst other things — quantum mechanics, the theory of which underlies nearly all of modern science and technology, for 'it governs the behaviour of transistors and integrated circuits which are the essential components of ... computers', the Newtonian theory of gravity, the law of thermodynamics, scientific determinism, quarks and glueballs.

The names physicists and scientists give their discoveries seem to indicate that they have a particularly sharp sense of humour. For apart from the aforementioned quarks and glueballs there are quasars, or quasi-stellar objects, and when Jocelyn Bell a research student at Cambridge and her supervisor, Antony Hewish announced the discovery of objects in the sky that were emitting regular pulses of radio waves, which indicated the existence of black holes, they called the first four sources to be found LGM 1-4. LGM stood for 'Little Green Men'!

The most amazing thing about this book is that although the subject matter is so esoteric, the manner in which it is written makes most of it absolutely understandable. I say 'most of it' because the Professor did, occasionally, go above my head.

By the way, this book was turned down by at least four big British publishers before it was accepted by the publishers who finally took it. A case of the heavy weights being beaten by a bantam?

D.M.

Gollancz Ltd., £10.95

Mona Lisa Overdrive

THERE are innumerable ways to write a novel. To unfold the story at a leisurely pace, to go slapbang into it and carry on at speed, to have plateaus of calm interspersed with high points, etc., etc.

William Gibson in 'Mona Lisa Overdrive' finds what seems to me an entirely new way. The nearest thing that I can compare his writing to is a well-scripted, action-packed, television play, a series of rapidly changing scenes which carry the action forward and which keep the viewer, or reader in this case, on his/her toes the whole time. Miss scene at your peril.

The three principal characters in this book are all female. Angie, a drug-addicted, holo-video-stim (sic) superstar, coming out of a detoxification programme; prostitute Mona, who spends practically all her time spaced out on 'wiz', a marijuana-type substance, and Kumiko, who has been sent, for her own safety, to London by here Japanese crimelord father.

The action is set in London of the future, Los Angeles — re-named with justification, I think, the 'Sprawl' — and Dog Soli- tude, a scraphead wasteland which could be anywhere.

Dog Solitude contains, in a derelict warehouse, the almost moribund body of Robert Newmark — The Count — Angie's erstwhile lover. He's rigged into a machine which contains a solid lump of microchip that can provide holo-graphics of his thoughts and into which another character, Slick, at the urging of computer genius Gentry, can protect himself. Exactly why Gentry insists on this eluded me, I must admit.

Angie wants to find Robert, the enemies of Kumiko's father want to find Kumiko and Mona wants to find herself. There are other peripheral characters, too, and I found them, in fact, more interesting than Angie, Mona or Kumiko.

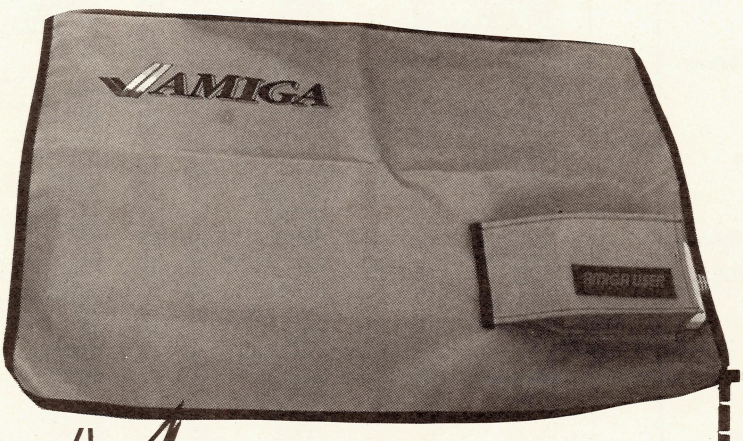
There's a gun-toting moll who starts off as 'Sally' turns into 'Molly' and ends up as 'Jane'; Angie's bald, black, gay, hairdresser, Pophyre, who looks like 'a greyhound on steroids' and dresses in Paris-designed clothes and there is Kumiko's 'com- panion', Colin. Colin is a 'ghost', a hologram housed in a hand-held biochip unit, who appears when Kumiko presses it. Now he is what I think would be a most useful object to have around. A going-away present given to Kumiko by her father, with whom she has a love-hate relationship because she thinks he caused her mother to commit suicide, Colin can communicate by picking up messages through his owners' skin, he's multilingual, able to record human speech like a tape-recorder, even when he's switched off, and a mine of useful information about anywhere he is at the time.

There are also a few other characters wandering about in a cyberspace matrix who keep impinging themselves into Angie's brain, but I wasn't quite sure who *they* were.

To be perfectly honest, I couldn't always under- stand 'Mona Lisa Overdrive'. Maybe that's because I should have read 'Neuromancer' (now about to be launched as a computer game) and 'Count Zero', the first and second books in this trilogy before I started. Nevertheless, it's an interesting story on its own. Try it if you would like a new experience and — I challenge you! — see if you are better than I at understanding what it's all about.

D.M.

AMIGA 500 — THE GREAT COVER UP!



Your swish new Amiga 500 should not be subjected to the ordeal of C — coke, coffee, crumbs and crips — at least not while you are not using it! So the best thing to do is cover it up — keep it protected by an exclusively designed Amiga 500 cover. Each CCI Amiga 500 cover is tailor-made, to fit the machine. It has the official Amiga logo printed in full colour on the top and is specialy created to give complete protection against dust and other damaging substances. It is expertly sewn throughout, fully bound and manufactured from very high quality grey supported nylon material.

It has a special mouse pocket and the whole cover fits snugly over the complete Amiga 500 computer, giving it extra protection to help keep it in good working condition.

The Amiga 500 cover — only £7.99 inc. p&p.

ONLY £7.99 incl. P&P

BUY ONE NOW!!

Commodore Amiga User International
40 Bowling Green Lane, London EC1R 0NE
I enclose cheque/P.O. No.
for the amount shown above payable to 'Croftward Ltd' or please debit my ACCESS account No.

Signature _____ Expiry date _____

Name _____

Address _____

_____

Telephone Number _____

Please allow 28 days for delivery.

SPEEDYSOFT

The Latest mail Order Service Available

CHRISTMAS OFFERS FOR THE COMMODORE 64/128

£1.00

Spellunker
Gyroscope
Redhawk
Everyones a Wally
Dummy Run
Space Doubt
Causes of Chaos
Batalyx
Fighting Warrior
Icicle Works
Bounces
Nexus
Starion
Master of the Lamps
P.C. Fuzz
Ffostbyte
Aliens
Starforce Fighter
Go for Gold
River Rescue
Space Tunnel
Zenji
Ork Attack
Swamp Fever
1 Ball 2
Code Hunter
Slurpy
K.G.B. Agent
Rock N' Wrestle
Pirate Base
On Court Tennis
A.T.V. Simulator
Agent X2
Micro Rythm
Mission Genocide
Craxy Comets
Hyper Blob
Radius
Fruit Machine Simulator
Rainbow
Thunderbirds
Thrust 2
Kikstart 2
Formula One Simulator
Superstar Ping Pong
Prodigy
Strangeloop
Sunburst
Motos
Talladega
TrailBlazer
Grand Prix Simulator
Rigels Revenge
Code Hunter
1 Ball
Bosconian
War Cars
Blackwyche
Geoff Capes Strongman
Ricochet
Crazy Comets
Wizards Lair
Back to the Future
Subteranea
Starquake
Death Race
Wizards Pet
Brainstorm
Angle Ball
Ball Crazy
Street Beat
Kromazone
Hole in One

£1.50

Monolith
Sorcery
Mindshadow
The Vikings
Kinetik
The Comet Game
Gortek & the Microchips
Gortek & the Kryptobytes
Rapid Assembly System
Sunstar
I.C.U.P.S.
Americas Cup
Gobots
Life Force
Death or Glory
Nu Wave
Spellbound
Stormbringer
Ciphoid 9
Cybord
Table Football

£2.00

Diablo
Scary Monsters
Saboteur 2
Blockbusters
The Trading Game
Magnetron
Masters of the Universe
Grange Hill
Express Raiders
Traz
Impact
Rana Rama
Metrocross
Gauntlet
Gauntlet Deeper Dungeons
Ace of Aces
Way of the Tiger 2
Snap Dragon
The Big Deal
Octapolis
Big Names Bonanza
On the Tiles
Impact
R.I.S.K.
Inside Outing
Shadow Skimmer
Discovery
World Games
Knightmare
Jack the Nipper
Convoy Raider
Shangai
Labyrinth
Kung Fu Masters
Shogun
Classic Collection 2
Jail Break

£3.00

Solomons Keys
Bride of Frankenstien
Hades Nebula
Flying Shark
Mutants
Hysteria
Star Games One
Athena 2
10 Computer Hits 3
Quartet
Que Dex
Firetrack
Rampage
Basketball
They Sold a Million 3
Basket Master
Game Over
Road Wars
Mag Max
Gauntlet
Hacker 2
Gryzor
Freddy Hardest
Athena
Tia Pan
Super Sprint
High Frontier
Guadal Canal
Wizball 2
Last Mission
Tobruk

£4.00

Fire Fly
Slap Fight
The Image System
Trivial Persuit Baby Boomer
Rolling Thunder

£6.00

Not a Penny More Not a Penny Less
The Vindicator
Typhoon
Metaplex

£6.50

Live & Let Die
Ultimate Golf
Rambo 3
Soldier of Fortune
Fernandez Must Die
Foxx Fights Back
Laser Squad
Hot Shot
Barbarian 2
Captain Blood
Empire Fights Back
Flinstones

£7.50

Thunderblade
Heros of the Lance
Bionic Commando
1943
Street Fighter
We are the Champions
Konami Arcade Collection
Magnificent 7
Cybernoid 2

£8.50

Supreme Challenge
20 Chartbusters

£10.00

Red Storm Rising
Airborne Ranger
Lancelot
Taito Coin Op
Project Stealth Fighter
Morpheus
Jewels of Darkness

DISC SOFTWARE

£1.50
Legend of Sinbad
Oils Well
Batalyx
Superman

£1.50
Scary Monsters
Challenge of the Gobots
Gunslinger
Dantes Inferno
Kinetik
Snap Dragon
Hypa Ball
Lords of Midnight

VISIT OUR STAND NO. 128 AT THE FORTHCOMING *COMMODORE COMPUTING SHOW* NOV. 18th-20th

★ Established 5 years ... Specialist Mail Order
★ Full range of discs available. Send for list.
★ Post & Packing included for orders over £5.00
★ Add 50p for orders under £5.00
★ Add 50p for orders under £5.00
★ Overseas orders welcome. Add £1.00 per tape for Europe. Outside Europe £2.00 per tape, Post & Packing
★ TO ORDER: Send cheque or postal order made payable to: SPEEDYSOFT
15 LADY BYRON LANE
KNOWLE
SOLIHULL
WEST MIDLANDS B93 9AT

★ Credit Card orders welcome. Phone 0564 77-5975 Mon-Fri 9.30 to 6pm. Sat 9.30-12.30.
WE ACCEPT VISA, ACCESS, MASTERCARD & EUROCARD

TRYBRIDGE SOFTWARE DISTRIBUTION

Title	CBM64 Cass	CBM64 Disc
Aces of Aces	2.95	
Action Service	6.95	9.95
Afterburner	7.45	10.45
Airborne R 128	9.95	13.95
Alien Syndrome	6.45	9.95
Am Civ War Vol 1,2 or 3		14.95
Andy Capp	2.95	
Ankh	1.00	
Apollo 18	6.95	10.45
Arcade Force Four	6.95	10.95
Archon Collection	7.45	10.45
Artic Fox	6.95	10.45
Arkanoid 2 Revenge	6.00	9.95
Armalyte	6.95	
Army Moves	3.95	
Artura	6.95	9.95
Athena	2.95	
Barbarian Psygnosis	6.95	
Barbarian 2 Palace	6.95	9.9
Bards Tale 1	7.45	10.9
Bards Tale 2 or 3		12.9
B A T		12.9
Batman Caped Crusader	6.25	9.9
Battlefront		14.9
Battle in Normandy		14.9
Best of Beyond	2.95	3.9
Best of Elite Vol 1	3.95	
Best of Elite Vol 2	6.95	
Beyond the Ice Palace	6.95	9.95
Bionic Commando	7.45	10.95
Black Tiger	7.45	9.95
Bounces	2.00	
Bubble Bobble	5.95	8.95
Buggy Boy	6.95	9.95
Butcher Hill	7.45	10.95
California Games	7.45	10.95
Captain Blood	6.95	9.95
Carrier Command	9.95	13.95
Carriers at War		14.95
Caveman Ugh-Lympics	7.45	10.45
Chessmaster 2000	6.95	10.45
Chuck Yeager	6.95	10.45
Classic Collection	3.00	
Combat Game	6.95	8.95
Combat School	5.95	9.95
Comet Game	1.00	
Consultant		10.45
Crazy Comets	2.95	
Cybernoid 1 or 2	7.45	10.95
Daley Thompson 88	6.50	9.95
Dantes Inferno	1.00	
Dark Fusion	6.95	9.95
Dark Side	6.95	9.95
Deathlord		10.45
Deja Vu		13.95
Derek Bells Le Mans	7.45	10.45
Doomdarks Revenge	2.95	
Double Dragon	6.95	9.95
Dragon Ninja	6.95	9.95
Dragonslair	2.95	
Druid	2.00	
Earth Orbit Station		12.95
Echelon	7.45	10.45
Elite 6 Pak 1,2 or 3	6.95	9.95
Emlyn Hughes Football	6.95	8.95
Empire	2.95	
Empire Strikes Back	6.95	9.95
Enlightenment	2.95	3.95
Espionage	6.95	9.95
Europe Ablaze		14.95
Exploding Fist +	6.95	8.95
Eye	3.95	5.95
4x4 Off Road Racing	7.45	10.45
4th and Inches	7.45	10.95
F16 Combat Pilot	9.95	13.95
Fair Means or Foul	5.95	8.45
Fast Break	7.45	10.45
Fernandez Must Die	6.95	9.95
Final Command		10
Fish		11.95
Fists & Throttles	8.45	9.95
Five Computer Hits	3.95	
Five star 1,2 or 3	6.95	
Flight Ace	9.95	12.95
Flintstones	6.95	9.95
Flying Shark	5.00	9.95
Fox Fights Back	6.95	9.95
Football Director	6.00	
F15 Strike Eagle	6.95	9.95
Football Manager	2.95	6.95
Football Manager 2	6.95	9.95
Freedy Hardest	2.95	
Frostbyte	2.00	
Future Knight	2.00	
Game Over 2	6.95	9.95
Game Set & Match	8.95	11.95
Game Set & Match 2	8.95	11.95
Garfield	6.50	
Gauntlet	2.95	
Gauntlet 2	7.45	0.95
Giants	10.45	12.95
G I Hero	5.95	8.95
G Lineker Hotshot	7.45	0.95
Gold Silver Bronze	10.45	12.95
Grand Prix Circuit	7.45	10.45
Guerilla Wars	6.45	9.95
Guild of Thieves		13.95
Gunship	9.95	13.95
Halls of Motezuma		14.95
Hawkeye	6.95	9.95
Headcoach	2.95	
Head Over Heals	3.50	
Heartland	1.95	
Hellfire Attack	7.45	10.45
Heroes of Lance		19.95
Hotshot	6.95	8.95
Hypaball	1.50	2.95
ICUPS	1.50	
Ikari Warriors	6.95	9.95
Impact	6.95	
Imp Mission 2	7.45	10.45
Infiltrator 2	7.45	10.95
Infordroid	1.95	
Ingrids Back	9.95	9.95
Instant Music	7.45	10.45
Intensity	6.95	8.95
Int Karate	2.95	6.95
Into Eagles Nest	2.95	
I O	6.25	9.95
Iron Lord	8.95	13.95
Jailbreak	2.95	
Jewels of Darkness	9.95	11.95
Karate Ace	10.45	12.95
Knightroc	9.95	9.95
Konami Collection	6.95	12.95
Korean War		13.95
Krakout	2.95	
Lancelot	9.95	11.95
Laser Squad	6.95	
Last Ninja	6.95	9.95
Last Ninja 2	8.95	9.95
L'Board Par 4	10.45	12.95
Legacy of Ancients		12.95
Lightforce	2.95	
Live Ammo	6.95	9.95
Live & Let Die	6.95	9.95
Lords of Midnight	2.95	
Madballs	5.95	
Mag Max	2.95	
Magnificent 7	6.95	12.95
Marauder	7.45	10.95
Mars Saga		10.45
Matchday 2	5.95	9.95
McArthurs War		13.95
Meanstreak	2.95	
Mega Apocalypse	7.45	10.45
Metaplex	2.95	
Metrocross	2.95	
Mickey Mouse	7.45	10.95
Micromud		10.95
Micro Soccer	9.95	13.95
Mindfighter	9.95	13.95
Mini Office 2	9.95	13.95
Mini Putt	6.95	10.45
Modem Wars		10.45
Morpheus	9.95	11.95
Motor Massacre	6.95	9.95
Mutants	2.95	
Mystery of Nile	1.95	
1943	7.45	10.95
19 Bootcamp	6.95	9.95
Netherworld	7.45	10.95
Nigel Mansell GP	6.95	10.45
Nightraider	7.45	10.95
Nodes of Yesod	2.00	
Ocean Compililation	7.95	11.95
One On One 2		10.45
Ooops	6.95	9.95
Operation Wolf	5.95	9.95
Outrun	7.45	10.45
Overlander	6.95	9.95
Pacland	6.25	9.95
Pacmania	6.25	9.95
Pandora	2.95	
Paperboy	2.95	
Patton vs Rommel		10.95
Pawn		13.95
Pepsi Mad Mix	5.95	9.95
Peter Beardsley	6.95	9.95
Phm Pegasus	6.95	10.95
Pirates	9.95	13.95
Platoon	6.95	9.95
Pool of Radiance		19.95
Power at Sea		10.95
Power Pyramids	6.95	
Predator	7.45	10.95
Presidert Missing		10.95
Project Missing		10.95
Project Firestart		10.45
Pro Soccer Sim	6.95	9.95
Puffys Saga	7.45	10.45
Race Against Time	4.95	
Rack Em	6.95	10.45
Rambo 3	6.45	9.95
Rasputin	1.95	
Reach For Stars		14.95
Red October	9.95	13.95
Red Storm Rising	9.95	12.95
Return of Jedi	6.95	9.95
Rex	7.45	10.45
Revs	2.95	4.95
Road Blasters	7.45	10.95
Robin of Wood	1.95	
Robocop	6.45	9.95
Rogue Trooper	2.95	
Rolling Thunder	7.45	10.95
Rommel		14.95
Romper Room	2.00	
Roy of Rovers	7.45	10.95
R Type	6.95	10.45
Russia		13.95
720	7.45	10.95
Salamander	6.25	
Samurai Warrior	5.95	9.95
Sanxion	2.95	
Savage	6.95	8.95
S D I (Activision)	7.45	10.45
Stentinel	2.95	4.95
Serve & Volley	7.45	10.45
Shaolins Road	2.95	
Shockway Rider	2.95	
Shoot em up Con Kit	10.95	
Shoot Out	7.45	10.45
Starfleet		10.45
Sidearms	7.45	10.95
Sidewize	2.95	
Silent Service	6.95	9.95
Silicon Dreams	9.95	9.95
Skateball	7.45	10.45
Skatecrazy	7.45	10.95
Skate or Die	7.45	10.45
Soldier of Fortune	6.95	8.95
Soldier of Light	6.50	9.95
Solid Gold	7.45	10.95
Space Ace	10.45	12.95
Sportsworld 88	9.95	10.95
Spy v spy Arctic	2.95	
Spy v Spy Trilogy	6.95	9.95
Star Wars	6.95	9.95
Stealth Fighter	9.95	13.95
Steel Thunder		10.45
Streetfighter	7.45	10.95
Street Soccer	7.45	10.95
Strikefleet		10.45
Strip Poker 2	6.95	9.95
Summer Olympiad	6.95	9.95
Super Hangon	7.45	10.95
Supersports	7.45	10.95
Supersprint	2.95	
Super Sunday	3.95	
Supreme Challenge	8.95	11.95
3 stooges		10.95
3 Weeks in Paradise		
10 Mega Games	9.95	10.95
20 Chartbusters	6.95	
Taipan	3.95	
Taito Coin Ops	8.95	11.95
Target Renegade	5.95	9.95
Techno Cup	7.45	10.95
Terrapods	6.95	
Test Drive	6.95	10.45
The Games Winter	7.45	10.95
Thunderblade	7.45	10.45
Thundercats	6.95	9.95
Tiger Road	7.45	10.45
Times of Lore	6.95	9.95
Time & Magick	9.95	9.95
Time Stood Still	6.00	9.95
T K O	7.45	10.45

Title	Amiga
Aaargh	14.95
Action Service	11.95
ADV Art Studio	14.95
Afterburner	16.95
Alien Syndrome	11.95
Alt Reality Atron 5000	11.95 10.45
Backlash	11.95
Barbarian 1 or 2 Pal	11.95
Bards Tale 1 or 2	16.95
B A T	17.95
Batman Caped Crusader	14.95
Battle Chess	17.95
Bermuda Project	14.95
Better Dead	11.95
Beyond Ice Palace	14.95
Bionic Comm	16.95
Blazing Barrels	11.95
BMX Simulator	9.95
Bobby Jazz Show	11.95
Bombjack	14.95
Bone Cruncher	9.95
Bubble Bobble	11.95
Bubble Ghost	11.95
Buggy Boy	14.95
Butcher Hill	13.95
California Games	17.95
Capone	14.95
Captain Blood	14.95
Carrier Command	14.95
Chessmaster 2000	16.95
Chronoquest	19.95
Colossus Chess	16.95
Combat School	14.95
Corruption	14.95
Cybernoid 1 or 2	16.95
Daley Thompson 88	14.95
Dark Castle	14.95
Defender of Crown	18.95
Deja Vu	11.95
Deluxe Music Con Set	49.95
Deluxe Paint 2	49.95
Deluxe Print 2	49.95
Deluxe Production	99.95
Deluxe Video	49.95
Double Dragon	11.95
Dragon Ninja	14.95
Dungeon Master	14.95
Earl Weaver Baseball	16.95
Eliminator	13.95
Empire	16.95
Empire Strikes Back	11.95
Enlightenment	14.95
Espionage	11.95
Exolon	16.95
F 16 Combat Pilot	16.95
Faery Tale Adv	29.95
Falcon F16	19.95
Fantavision	29.95
Fed of Free Trade	19.95
Fernandez Must Die	14.95
Final Command	16.95
Fish	14.95
Ferrari Formula 1	17.95
F15 Strike Eagle	14.95
Final Command	17.95
Flight Sim 2	26.95
Flt Disc 7 or 11	13.95
Flt Disc European	13.95
Flt Disc Japan	13.95
Football Director 2	11.95
Football Manager 2	11.95
Foundations Waste	14.95
Frontier (EPT)	14.95
Fusion	16.95
Game Over 2	13.95
Garfield	11.95
Garrison 2	14.95
Ghosts N Goblins	14.95
Giganoid	9.95
Golden Path	11.95
Green Beret	14.95
Guerilla War	14.95
Guild of Thieves	14.95
Gunship	14.95
Hawk	17.95
Hellfire Attack	13.95
Helter skelter	9.95
Heroes of Lance	16.95
Hollywood Hijinx	7.95
Hotshot	11.95
Hunt For Red October	14.95
Ingrids Back	11.95
Ikari Warriors	14.95
Impossible Mission 2	17.95
Interceptor	16.95
Iron Lord	16.95
Jet	26.95
Jewels of Darkness	11.95
Jinxter	14.95
Kennedy Approach	14.95
Knightorc	11.95
Lancelot	11.95
Land of Legends	16.95
Laser Squad	16.95
Leaderboard Birdie	16.95
Leather Goddess	19.95
Legend of Sword	14.95
Live & Let Die	11.95
Lombard RAC Rally	14.95
Manhatton Dealer	14.95
Mars Cops	11.95
Menace	12.95
Mercenary Comp	14.95
Monsters of Night	17.95
Mortville Manor	15.95
Motor Bike Mandess	9.95
Motor Massacre	13.95
1943	17.95
Nebulus	17.95
Netherworld	17.95
Nigel Mansell	16.95
Night Raider	13.95
Oops	11.95
Operation Wolf	14.95
Outrun	13.95
Overlander	14.95
Pacmania	11.95
Pandora	11.95
Paperboy	14.95
Pawn	14.95
Pepsi Mad Mix	
Peter Beardsley	11.95
Phantom Fighter	13.95
Phantasm	11.95
Platoon	14.95
Pool of Radiance	16.95

MAIL ORDER

Please send cheque/PO/Accesss Visa No. and expiry date to:
TRYBRIDGE LTD, 72 NORTH STREET, ROMFORD, ESSEX RM1 1DA
Please state make and model of computer when ordering. P&P inc. UK on orders over £5.00. Less than £5.00 and Europe add £1.00 per item.
Elsewhere please add £2.00 per item for airmail. TEL. ORDERS: 0708 765271.

EMPIRE

Wargame of the Century

Interstel Corporation/Electronic Arts

Computer games can generally be divided into two different categories — arcade games and adventures, with the further subdivision of the arcade-adventure. This works fine, until you meet with a game like Empire, which doesn't slot into any, it is in fact a computerised wargame-cum-simulation. Traditionally, most people's vision of wargames is of moustached old men huddled around a vignette battlefield covered in painted toy soldiers. Or to put it another way, about as interesting as watching milk go sour.

Empire is supplied in a large pack on one disk accomanied by a quick reference guide and a massive 63 page manual. Dedicated arcade addicts can switch off now because this game is not for them. Empire is a game for those interested in the finer details of strategy, planning and world domination. For most people the idea of a game you can really get your teeth into would be quite enough, but Interstel have found it necessary to gloss over the package with a dodgy space-age scenario, which, quite frankly seems out of place.

The disk is not protected so you can back it up or transfer it to hard disk. In order to play you must enter a couple of words from the extremely verbose manual. Personally, this is my favoured form of protection since it prevents most pirates from bothering and you can keep the original safe.

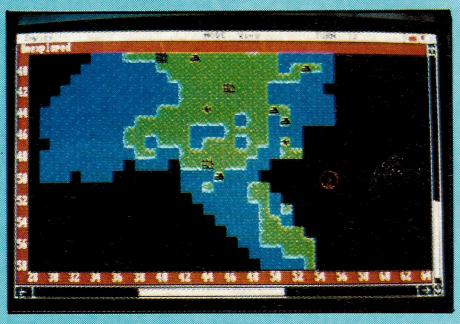
Once the game loads you may either select a demo mode or enter the game proper. Before you try to play the game, it's worth watching the demo for an hour or two, while the computer plays itself.

This will give you a pretty good idea of what to do, even if you don't bother to read the manual first.

Once you're in, the game presents a rather blank-looking display — no frilly extras in this game — in fact the only definitive high resolution graphics belong to the title game. The rest of the graphics are similar to those found in SSI games like the Ultima series or the Public Domain offering, Larn. Selecting the project menu gives the option to either design your own worldscape or generate one at random. Random designs will get you started quickly, this can however put you at a disadvantage, especially if you end up on a small land mass with very few cities.

From here on you can explore the world. When the game starts, you know nothing about the surrounding territory or what lies within. But you can give commands to your single army to go in search of places to loot. This is achieved by clicking over the army to move, rubber-banding a line to their new position. As you assault and take over new cities, their resources become available. Each place can manufacture various types of armourment, ships and even recruit new armies — you decide which. The tougher the task you set, the longer it takes — although this factor is affected by the productivity of individual cities.

By the time you have spent an hour or two building up your army — in game time around 150 turns or so, you will probably start running into packets of resistance — the other players. Up to three people can play Empire, the others being either human or computer — there's even an option to play by mail, although I have not had the opportunity to try this out. Battles can take place on land or sea and are completed automatically with the computer acting as referee. Whether you win or not seems to be rather in the lap of the gods, but it does depend on many factors, not least the strength of individual armies.



All in all, Empire is a thoroughly enjoyable game which I have played for hours on end, right now my armies are ready to descent on Thermopylae, so I am just taking enough time out to write this before the Editor pinches the disk back. Although it should carry a government health warning — it can seriously damage your sleep patterns . . . Highly recommended.

Now, let battle commence . . .

J.F.

Graphics: 4
Sound: 4
Playability: 10
Value: 8
Price: £24.95

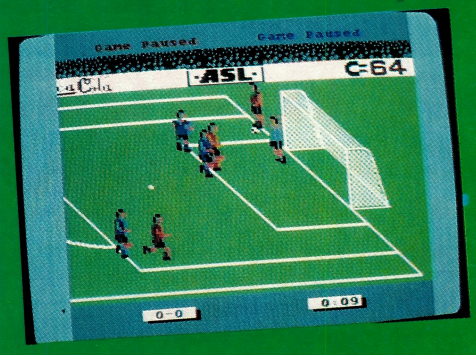
Audiogenic

EMLYN HUGHES' INTERNATI

WHO needs Gary Linekaeor Peter Beardsley when you can have Emlyn Hughes? Yes it's that squeaky little scouser from Liverpool behind the licencing from Audiogenic's latest game, Emlyn Hughes International Soccer. As I am sure, most of you who have the tiniest bit of interest in football simulations will have played Commodore's International Soccer, which in my books was the best to date. You can be forgiven for thinking that *EHIS* is the same game because they look almost identical, but behind those chunky graphics lies an even more realistic and fun games than the old CBM favourite.

EHIS has been programmed to combine all the fun and excitement of a football simulation as well as a strategic side for those of us who like to put a bit of thought into the game. But you do not to have to use your brain if you're not feeling in an energetic mood, because there are options which let you get straight into a match without any fuss.

On the main screen you are presented with a set of pull-down icons where all the options and settings are held. Together with the usual moves, you can also control your player to do the following at the correct time: backheels, sliding tackles, free-kicks, penalties, headers and diving headers, sidestepping and barging. To perform a slide tackle or either of the headers, all you have to do is press the fire button when your player is near the ball, and depending on whether the ball is in the air or not the player with either slide at the ball or attempt to head it. Although the graphics of the main sprite are very blocky and over expanded, they seem to have a certain character which makes them very cute. This is highlighted when you make a slide tackle and accidently(?) foul your opponent. A free-kick would then follow or a penalty if the foul were commited in the goal area.



"There is also a Cup knockout competition where the eight teams all compete, as well as nice touches such as players' skill levels and substitutes."

A minor fault that I found when taking the penalties was that players from the opposing side could actually stand in the goal-mouth and prevent the ball from crossing the line. However, the copy that I had was not completely finished so that little bug may not even be in the copies on sale in the shops. Apart from this I couldn't find any other faults and for that the game ran very smoothly, partly due to it not being a multiload as so many games around these days are.

'I could go on for ages talking about the hordes of options available because there are so many. A great deal of thought has been put into the variation of play never seen in any other soccer game before. The options range from changing the pitch colour (you can even have purple grass!) to a 'save all' facility which enables you to save up to eight teams, scores, fixtures and league tables. There is also a Cup knockout competition where the eight teams all compete, as well as nice touches such as players' skill levels and substitutes.

The sound is the games worst point, with very annoying music and poor sound effects. The only sound fx that I liked was the cheering of the crowd. Whenever

the ball is saved by the 'keeper or goes just wide of the goal, the crowd become excited and cheer you on. This adds to the tension and has you on the edge of your seat as you see the ball ricochet off the crossbar and into the goal.

As you can see by the screen shots, the graphics are not of the highest standards, being very blocky, but it is the actual gameplay which makes ***EHIS*** such a fun and enjoyable game. I would go as far as to say that it is the best football game ever with the perfect blend of strategy and captivating play.

D.H.

Graphics: 64%
Sound: 32%
Playability: 94%
Overall: 92%
RATING:
Awesome

ONAL S CCER

Awesome

COMPUTER OWNERS...
THE GAME OF THE YEAR IS...

Thunder Blade™

JET HELICOPTER SIMULATOR VIDEO GAME!

CBM 64/128
£9.99 Cassette
£14.99 Disk

Amstrad
£9.99 Cassette
£14.99 Disk

Spectrum
£8.99 Cassette
£12.99 Disk

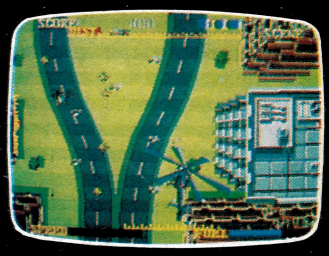
Atari ST
£19.99 Disk

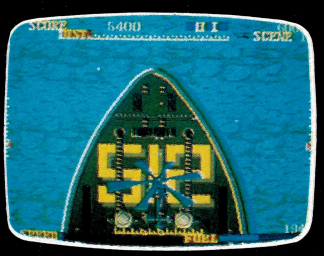
Amiga
£24.99 Disk

THE SINGLE MOST POPULAR ARCADE MACHINE IN EUROPE SINCE OUTRUN

U.S. GOLD®

SEGA®





IN A COMPUTER STORE NEAR YOU ON THE 1ST OF DECEMBER 1988

VOTE FOR THE BEST IN 1988

Computer Leisure Awards

For the first time ever, you will be able to join with the readers of many other British magazines to decide who and what was best in 1988. Awards will be made to software producers resulting from your voting through, this, your own magazine, for what you considered to be the best games you have played on your computer during the past year.

Many other magazines are carrying this voting form. It means the results will truly be democratic, and therefore really mean a lot to those who receive them.

The votes will be collated by an independent company, to whom you should post your voting form, and the awards will be presented at the Computer Leisure Industry's 'get together' — Computer Arena — in March 1989.

So, simply fill-in the voting form below, cut it out (or photocopy it) and send it to:

GAMES OF THE YEAR
MICHAEL BAXTER
SOLUTIONS PR
2 WELLINGTONIA COURT
VARNDEAN ROAD
BRIGHTON BN1 6TD

COMPUTER LEISURE AWARDS 1988 VOTING FORM

1) Please tick the computer format you are voting for:

- AMIGA ☐
- AMSTRAD CPC ☐
- ELECTRON ☐
- COMMODORE 64/128 ☐
- PC COMPATIBLES ☐
- ATARI ST ☐
- SPECTRUM ☐

3) Please state what you consider to be the BEST GAME OVERALL of 1988:

4) Which Software House do you choose as being the most consistent in producing high quality computer games during 1988:

2) Please name your choice of best game (from the format ticked above) of 1988:

1. **Best ARCADE game**
2. **Best ADVENTURE game**
3. **Best STRATEGY/WAR game**
4. **Best MUSIC with game**
5. **Best USE OF GRAPHICS**

Name .....

Address .....

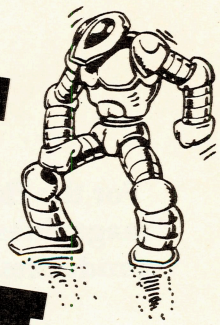
.....

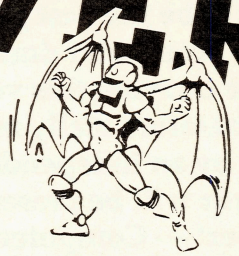
..... **Postcode** .....

C64

IFFY

GAME OVER II





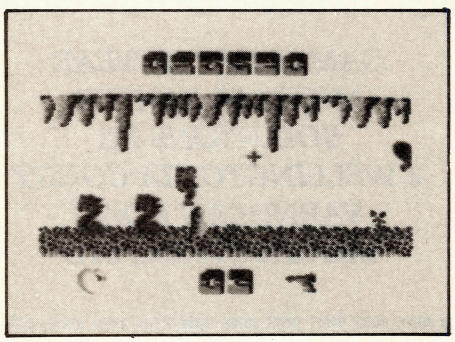
Dinamic

After the hype and attention that has surrounded Dynamic's releases in the past, the underlying games have always seemed pretty ordinary. Surprisingly, Game Over II marks no change in his unfortunate situation.

The game gets off to a less than enticing start with the initial horizontally scrolling shoot 'em up stage. Weedy aliens slide about the screen in some of the most drab formations seen since Scramble. These are intermingled with bouts of asteroid attacks until the featureless starscape background changes to a planet surface. Volcanos throw up rocks dangerously close to your ship, small meteors plummet to the ground and the few remaining aliens continue to harass you. Stage three has you zapping wormy monsters in similar sub-terranian scenery.

"To begin with you are without any form of missile but instead have a strange bouncy green head following you around. The baddies roll up on space-hoppers which can only be killed by touching them with your faithful green blob"

Stage four of the first section introduces a welcome variation to the proceedings. Riding a dinosaur-like creature (just like the one in Rim-runner) your defence against the monsters now takes the form of a flickering globe. This can be extended in a number of directions giving a skilled player all-round protection. Sadly the repetition is too



prominent, resulting in premature boredom.

To avoid having to play through all the earlier screens once they have been completed, a code is given on the completion of the first section which allows instant access to the second.

Section two has you controlling a jet-packed spaceman in a flip-screen arcade adventure/platform game. To begin with you are without any form of missile but instead have a strange bouncy green head following you around. The baddies roll up on space-hoppers which can only be killed by touching them with your faithful green blob.

Soon enough you find the ionic turbo laser and the game reverts to a more standard jump, search and shoot orientated adventure. Extra lives, weapon upgrades and an access pass are some of the objects to be sought.

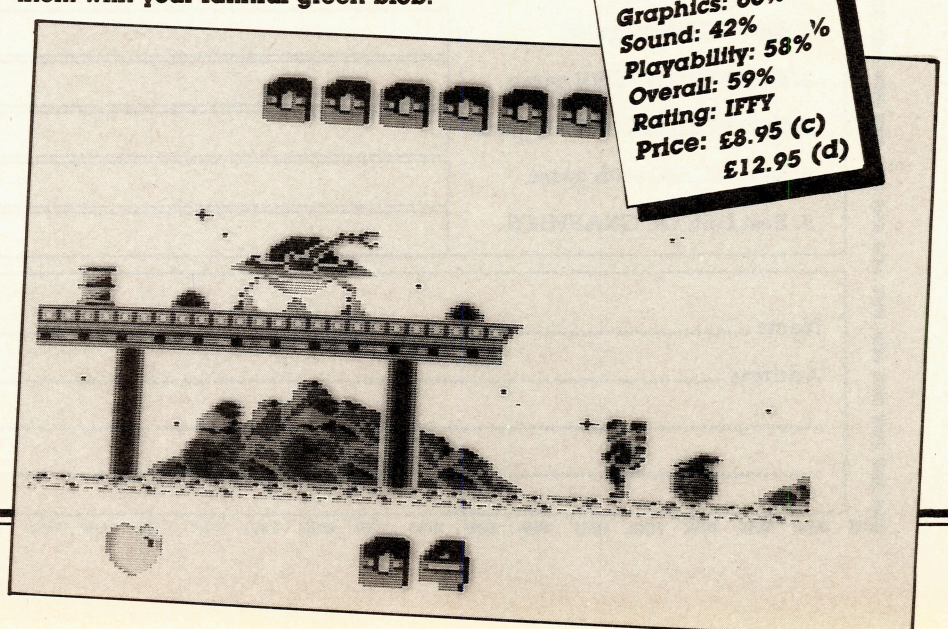
Game Over II's strongest point is its variety. The problem is that only the final stage is up to scratch, and even that has some very familiar game-play. These well-worn game ideas do not fit together as one game, giving more a feel of a compendium than a single flowing game.

In places the graphics are very well drawn and animated. In others, the shoot 'em up section for example, they are extremely weak. Throughout the whole game there are a number of sound effects but too often a single effect overwhelms all the others.

Game Over II is a typical Dynamic game but for the lower overall difficulty level. As with Army Moves, Game Over and Freddy Hardest, none of the game sections has enough in it to keep you playing for long. The technical expertise is there for some great games, they just need some worthy designs to allow full rein to their undoubted talents.

T.H.

Graphics: 66%
Sound: 42%
Playability: 58%
Overall: 59%
Rating: IFFY
Price: £8.95 (c)
£12.95 (d)



C64

IFFY

TRIVIAL PURSUIT

A NEW BEGINNING

Domark

Take Trivial Pursuit, strip out all the board game elements, replace them with some aliens and a bit of space travel and you end up with Trivial Pursuit — A New Beginning.

The story tells of a time in the future when Earth is dying. Genus II, a life-supporting planet is the destination of an organised migration. The problem is, the inhabitants are fussy about who they allow onto the planet and so a test of trivial knowledge must be passed before they approve of you.

You start at the launch pad on Earth. All the players line up and are asked questions in turn by a character known as TP (you may remember him from the original game). Get the question right and you are taken out to the rocket and blasted into space. Get it wrong and you go the back of the queue.

Once in space it's time to choose a planet to beam down to. Six wedges are needed before you can get to Genus II, one of which can be found in each of the six galaxies. Select a planet and beam onto its surface where an alien will ask you a question. The planet names are said to hold clues to their subjects, but I failed to grasp any connections. If there is no wedge on the planet, a correct answer is needed to make another selection.

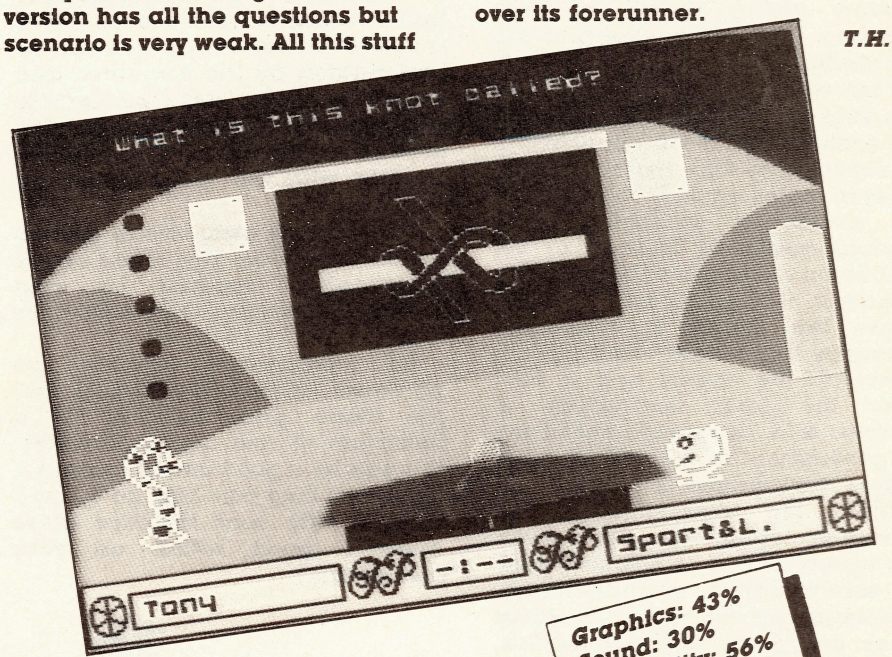
"The new version has all the questions but scenario is very weak."

Some variety is introduced when very occasionally a graphical or musical question is asked. Once all six wedges are in your possession you can fly off to Genus II. The Elders quiz the players until they are satisfied of their worth, whereupon a tune is played and you are congratulated on your achievement.

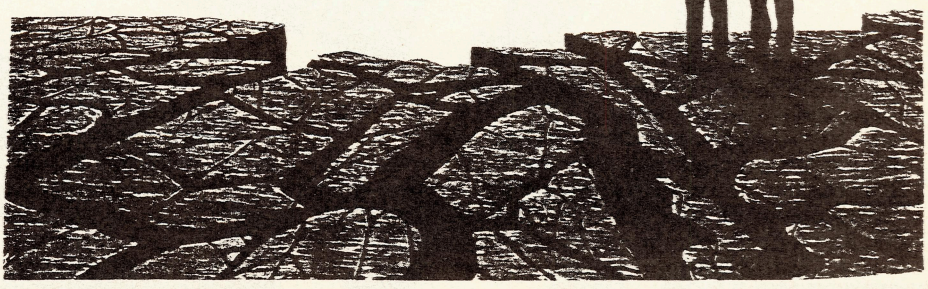
The original Trivial Pursuit board game obviously had a lot of time put into its design. The new version has all the questions but scenario is very weak. All this stuff about flying through space really has no bearing on the skills demanded from the player. It only serves to provide a few new backdrops for the questions. Trivia games have lost a lot of the appeal they held a couple of years ago, and this is no exception.

Amiga and C64 versions are virtually identical. Graphics are slightly less blocky on the 16-bit version, with a few samples here and there but that's about it. Anyone with the first game needn't bother with the sequel, and I can see little reason why anyone else should choose this over its forerunner.

T.H.



Graphics: 43%
Sound: 30%
Playability: 56%
Overall: 53%
Rating: IFFY
Price: £14.99 (c)
£19.99 (d)
Amiga £19.99



Inside Trader

Whenever share dealing rooms are shown on news and analysis programs they always show the banks of computer screens. The latest PC game release from Microprose and Cosmi now allows you to feel what share dealing is really like using your own machine.

The Inside Trade game involves the buying and selling of shares, via your terminal, on a fictitious stock exchange. You commence your career as a stock broker with initial capital of 50,000 dollars, the object then is to increase this into millions.

Windows are used to show four aspects of the dealers job. A tickertape giving the latest prices of all the shares on the market, a small command window, an events window showing stories that will effect share prices and a status window giving details of your portfolio. The events shown in the Event window have different effects on the share prices and you must use your skill in interpreting these. They range from the announcement of expected results by the government to major world events such as the accidental launching of a nuclear missile at Moscow or the prediction of the end of the world by scientists. Both of these, of course, cause the shares to nose-dive. Strangely the missile event did not effect all the shares and if fact, after the total destruction of Moscow and the agreement of the US government to re-build it, some shares did increase in value.

There are approximately 100 shares quoted on the market covering various areas of business such as entertainment, manufacturing, petroleum, timber, retail, etc. All of these are given fictitious names, but these can be customized to give it more of a flavour of reality with the use of major international companies. The Events file can also be customized so that this area can be brought closer to reality by the use of real events.

"An Option is available to destroy all the evidence. The result of the investigation depends on your actions and ranges from nothing to a hefty fine."

All this is standard stuff and does not relate to the title of the game, Inside Trader. As part of the Events file inside information items are also offered for sale. These can be expensive but do provide the means of increasing your capital quicker that reacting to news events. There is a problem however, as you can be investigated by the Securities and Exchange Commission for insider dealing. Your response to this depends on whether you want to co-operate with the investigation or not.

An Option is available to destroy all the evidence. The result of the investigation depends on your actions and ranges from nothing to a hefty fine.

No companies actually go bankrupt, all that happens is that the share price remains at a minimum of one dollar. However, this can be a good time for you as a dealer as they can only go up and even a fifty cent increase gives quite a good return on your investment.

The game obviously falls into the simulation category and gives a good feeling of what life may be like as a share dealer. All communications with the game is in the form of commands and these could be the games only fault as some are lengthy and cannot be abbreviated. As usual with Microprose this is a well constructed and presented game which comes on 5 1/4 inch disk with a sixteen page manual.

L.K.

Price: £24.95

IF YOU WIN, YOU LIVE
IF YOU LOSE.....?

LEISURE GENIUS presents

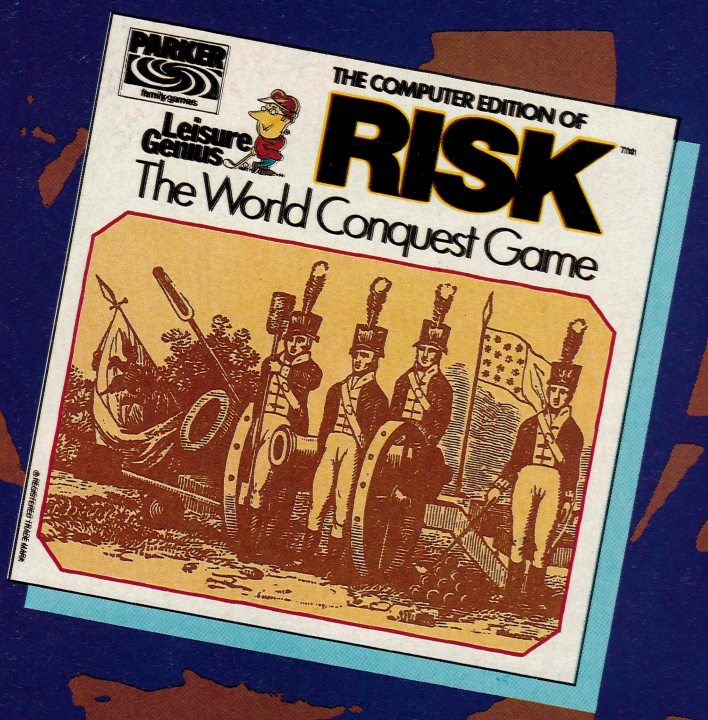
the computer edition of

RISK™

THE WORLD CONQUEST GAME

RISK™ is a classic game of strategy. This superb computer version allows you to play with up to 6 friends, or solo against the computer. Computer RISK™ provides intelligent opponents to challenge your powers of strategic planning. There are imaginative graphical interpretations of the game elements, including large, scrolling maps. There's a game-save facility and rule variations to choose from.

RISK™ pulls no punches so prepare for ruthless battles with General versus General and cunning traps.



MASTERTRONIC

Available from good retailers or direct from VIRGIN GAMES, 2/4 Vernon Yard, Portobello Road, London W11 2DX.

(Please do not send coins or money)

out on	
CBM CASS	12.95
CBM DISC	14.95
soon on	
SPECTRUM 48/128k	9.95
SPECTRUM + 3 DISC	14.95
AMSTRAD CASS	9.95
AMSTRAD DISC	14.95
IBM PC & Compatibles	24.95

RISK is Parker Brothers trademark for its world conquest video game and game equipment. Package and contents ©1959, 1988 Parker Brothers, Division of Tonka Corporation. Used under license from Parker Brothers.
Leisure Genius © is a registered trademark of Virgin Mastertronic Ltd.
Software © copyright 1988 Virgin Mastertronic Ltd. All rights reserved.

PARKER family games

Leisure Genius

Tim Metcalfe wanders through a cultworld and reveals himself a Hobbitomane . . .

The classic fantasy trilogy, Lord of the Rings, has never really been done justice by computer programmers. The last two attempts at creating adventure games based on these classic books have, to say the least, been pretty awful. Now, at least, Melbourne House have come up with a genuinely good game based on Tolkien's magical world. It's called War in Middle Earth . . .

WAR IN MIDDLE EARTH

Melbourne House

Strategy, action and adventure are all part of War in Middle Earth, the first release from Melbourne House since the company was taken over by Richard Branson's Virgin software operation. But work on this game began a long time before Melbourne House was even a gleam in the record magnage's eye.

Created in the USA by Synergistic, a game development team packed with Tolkien addicts, this latest addition to the growing number of computerised fantasy games is about as accurate a representation of *The Lord of the Rings* trilogy as you're likely to get.

You can simply load the game and sit back and watch, as the events in the books are replayed on the small screen by animated characters in glorious technicolour! If you want to play the game you can do that too . . .

You can play it at 'character' level, becoming Frodo on his journey to Mount Doom where he must destroy the all powerful Ring which gives Tolkien's trilogy, its title. Alternatively you can play wargame style — mobilising the various armies of Middle Earth against the evil warlord Sauron.

The game scenario must be familiar to everyone — but in case you have had your head stuck down a hobbit hole for the last couple of decades, here is a brief look at the plot of War in Middle Earth.

Frodo has inherited The Ring from his uncle Bilbo Baggins, Frodo's mentor, Gandalf the Grey has revealed the true power of the ring to his young friend and has told him he must destroy the evil thing by dropping it into the flames of Mount.

Mount Doom just happens to be slap bang in the middle of the lands controlled by Sauron. But being a good egg, Frodo decides he must save the world.

This is where War in Middle Earth begins. The players first task is to get Frodo to Rivendell safely — evading the Nine Nazgul. Then you must attempt to move south to the dark lands of Mordor.

Frodo has to find certain objects which will help him win the hearts and minds of the nations of the west. You will need these armies to thwart Sauron's serach for the Ring Bearer and fight off the hoardes of orc and dunlendings controlled by the warped wizard Saraman.

If you are a true Hobbitomane you can simply follow the plot of the book — and you might make it to Mount Doom. However, in the computer version Frodo can die — and a new Ring-Bearer can take over the sinister burden.

The Ring can also be captured by the forces of evil — but whoever holds it still has to make it back to Sauron's headquarters. You can stop that happening and still manage to destroy the Ring.

THE GAME STRUCTURE

This game takes place on more than one level. Firstly there is the 'Full Map Level'. This is simply the complete map of Middle Earth. You can move around on this to see where the major forces and characters are at any one time.

Then there's the 'Campaign Level'. In practice this is where most of the action takes place. It's a more detailed map of the lands of Middle Earth. On it you see small representations of major characters, together with icons representing armies, fortresses, towers and so on.

Finally there's the animation level. This gives you a detailed and graphically impressive view of a single location. Characters are represented by animated figures moving against a digitised background in a similar fashion to recent Cinemaware products.

On this level you can instruct indivisual characters to use items, direct their actions in combat and even engage in conversations with other characters who appear from time to time during the game.

CONTROLLING THE ACTION

It is possible for you to give orders to every individual orc or elf in the various armies of Middle Earth — but you can take control of the actions of the major well-known characters featured in the books.

There are two types of 'playing pieces' under your control. First, the characters familiar to Tolkien readers.

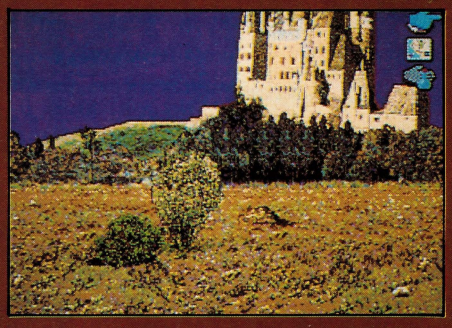
At the start of the game you control the actions of three hobbits, Frodo, Sam and Pippin. As you go through the game you'll meet other famous names — and some will join your quest. If you play your cards right, you'll soon have Strider, alias Aragorn, and Merry joining your band of adventurers.

Other characters, like Elrond and Tom Bombadil, are non-player characters, but will give you useful advice and information.

At the start of the game each character will follow a pre-programmed set of actions. If you decide not to interfere and order them to do something, they will continue to go through their programmed actions — right until the end of the game, if that's how you want to play it.

Secondly, there are armies of dwarves, elves and men. They are represented on the campaign map by icons or 'badges'.

These armies operate in units, ranging from a division of say, around 100 troops, to a massive force of several thousand soldiers. You can move these forces around the map and bring several units together — but you can't split up individual groups.



But beware, they actually behave as real forces would. They can only move a certain distance during a day at a certain speed, they get tired, and they sleep when it gets dark.

ICONS AND WINDOWS

Movement, issuing commands and swapping between levels are controlled by a simple icon system.

A useful icon to get to grips with while playing is the Eye, which allows you to gaze into Galadriel's Mirror, which as every good Hobbitomane knows, is the magic pool in Lorien. This tells you which evil forces are active — but unfortunately not what they are up to!

If you are in campaign mode and want to see other parts of Middle Earth, you can either call up the large scale map and use the 'magnifying glass' icon to examine the area you are interested in in more detail — or more simply, just scroll across the map using the cursor keys or joystick.

You can also use the 'magnifying glass' icon to take you into the animation level. Sometimes messages will appear in 'windows' on the screen which invite you to visit certain locations where something interesting is happening. It could be a battle or simply an encounter with another character.

Watching massed battles is enthralling. The graphic representation of the various forces is excellent. You can even get stuck in to help decide the outcome by urging your forces via another simple menu window.

You get a run-down on battle statistics in another 'window' if you choose not to visit the scene in person. You see the ebb and flow of conflict as the numbers of the opposing forces are depleted. At the end a further message tells you who won.

Individual combat is also controlled by a menu system. You can order characters to run away, fight or simply stand around and see what happens.

The game has its own 'clock' which ticks away the days at the bottom left hand corner of the screen. You can speed things up by altering the response time of the game. There are three speeds — normal, hasty and very hasty. Very hasty is not to be recommended until you are very good at the game. Things happen too damn quickly!

The finished game will come with two sets of instructions, one for a quick-start, the other more detailed for reading at your leisure.

There will be a poster sized map of Middle Earth and a comprehensive guide to the world Tolkien created which, if you haven't actually read any of the books, might just encourage you to do just that. Plus a guide to game strategy and even a biography of Tolkien together with a reading list.

My guess is that once you have played the game a few times and enjoyed watching the pictures, the main action will take place at campaign level — so it could be said this is more a wargame than an adventure. Nevertheless, War in Middle Earth is the best Tolkien-inspired computer game yet released.

The 16-bit versions have been developed by Synergistic in the USA while the 8-bit versions were developed by Mike Singleton in the UK and feature slightly different gameplay to that described above.

The Amiga version will cost £24.99. C64 tape versions will cost £9.99, while disk versions, which should be available early in the New Year, will cost £19.99.

T.M.

A MAMMOTH COMPILATION OF WORLD BEATERS...

When the golden team take their golden games and add a little bit of golden magic, then there's only one outcome .... a GIANT success. Five giant games squeezed into one giant compilation.

OUTRUN ... "To be blunt this game is going to outsell anything ..... a flippin good game – test drive one today!!" *Your Sinclair*

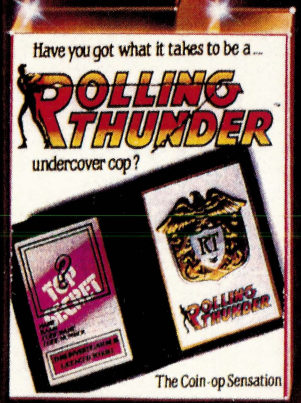
720° ... "Virtually flawless arcade game. Addictive, smooth and slick, easily U.S. Gold's finest hour. Don't miss this one." *Sinclair User*

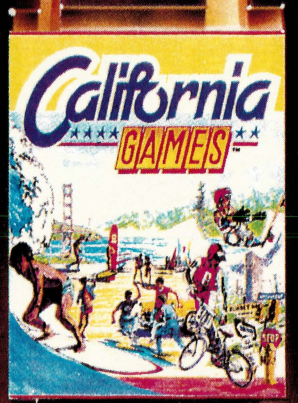
GAUNTLET II ... "It's one of the finest conversions I've ever seen". *C & VG*

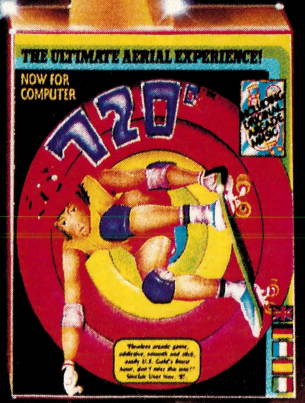
ROLLING THUNDER ... "An excellent game, full of atmosphere, suspense and outstanding playability. Do not miss it!" *CCI*

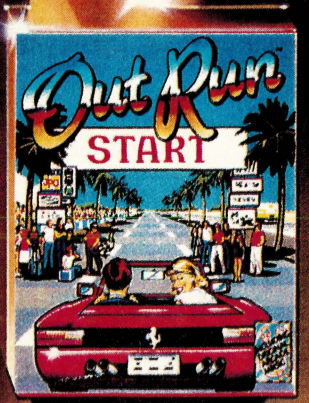
CALIFORNIA GAMES ... "Quite simply the apex of computer sports gaming" *Zzap 64*

GIANT









SPECTRUM 48/128K
£14.99t, + £19.99d
CBM 64/128
£14.99t, £17.99d
AMSTRAD
£14.99t, £19.99d

U.S. Gold Ltd.,
Units 2/3 Holford Way,
Holford, Birmingham
B6 7AX. Tel: 021 356 3388

Charts

Chart Chattering Events . . .

There is a pause before the storm . . . before the deluge of the "greatest games the world has ever seen" descends on us. . . . In other words, the end-of-year bonanza in which every single one of the games houses has the number one chart-topping never before equalled megasmash. In the meantime, while you are all holding your breath, life goes on and games are bought and played. Like Barbarian II, Palace's excellent chop 'em up which, with little help from the pneumatic Maria Whittaker (shortly to appear wearing even less for Anco) stays at the Top Spot for the second month running (or slashing!). Also hanging in there with his usual determination is Daley Thompson with Ocean's well-received Olympic Challenge still at Number Two. U.S. Gold's new entry compilation, Gold, Silver and Bronze shoots straight to Three while the mysterious charms of Tracksuit Manager (Does it exist? Goliath never managed to send it in for review no matter how many times we asked!) officially keeps fourth place. Microprose's mighty Red Storm Rising makes its move and enters at Five and another compilation Elite's Fists and Throttles (Could they have found a more unpleasant title?) is a breaker at Six. The everlasting Football Manager II slips a place to Seven.

At the £1.99 — or the £2.99 price too which seems to becoming a regular price point for the likes of KIXX (read U.S. Gold) and Encore (read Elite) and even Code-in-de-nose-Masters whose simulation obsession looks like costing the cheapo buyers a pound more too. Even so Gauntlet from KIXX has hit The Big One, moving up from one place lower last month. Good old Ace from Cascade moves up a place and there are couple of new entries from the successful Alternative and Players stables. End Zone and Joe Blade number II this time.

On the Amiga front, we don't like to say "We told you so!" (We do actually!) but when we said that Mirrorsoft's Rocket Ranger was something very special we obviously had people out there listening to us. (Not you, Mr Amiga User? Shame on you!) Well it exploded its way right through all the other Amiga games around and has launched itself up to the giddy heights of the Chart-topping spot at first try. And if you want to know, we predict that its going to be very, very hard to shift for the next month or three.

	GAME TITLE	COMPANY	PRICE	RATING
1	Barbarian II	Palace	£9.95	Mega
2	Daley Thompson's Olympic Challenge	Ocean	£9.95	Mega
3	Gold Silver and Bronze	U.S. Gold	£14.99	Mega*
4	Track Suit Manager	Goliath	£9.95	T.B.A.
5	Red Storm Rising	Microprose	£14.95	Mega*
6	Fists and Throttles	Elite	£12.99	Crisp*
7	Football Manager II	Addictive	£9.99	Crisp
8	Roadblasters	U.S. Gold	£9.99	Crisp
9	Last Ninja II	System 3	£12.95	Mega
10	Cybernoid II	Hewson	£9.95*	Crisp

Budgets

1	Gauntlet	Kixx*
2	Ace	Cascade*
3	End Zone	Alternative
4	Joe Blade II	Players
5	Rally Driver	Alternative

Amiga

1	Rocket Ranger	Mirrorsoft	£29.99*
2	Starglider II	Rainbird	£24.95
3	Battle Chess	Electronic Arts	£24.95*
4	Virus	Rainbird	£24.95
5	Interceptor	Electronic Arts	£24.95

* NEW ENTRY

HORGAN'S HINTS

Fed up with all this Christmas business? How many shopping days were left? What would be number one in the record and software charts, what colour socks your auntie buys you, will The Wizard of Oz be on again? Do you give a toss? Fear not, for this month's portion of pokes is guaranteed 100% free of Christmas references, now is that considerate or what?

The Great Escape
Low morale levels can be a real downer, but this pick-me-up from Tim Collins in Co. Leitrim will cheer you up. Load the game and reset the computer before entering:

POKE 17343,165:SYS 271

Attack of the Mutant Camels
David Higginson tells me this poke will "shut 'em up!" (refering to the camels of course). Reset after loading and type:

POKE 7019,0
SYS 4096

Gauntlet (Kixx version)
Andy and Gary Brown have supplied the following hacks.

Reset and type:
POKE 49009,96
SYS 32768

Chubby Gristle
Load, reset and enter:
POKE 3613,173
SYS 2994

Last Mission
Here's a consolation poke for anyone unfortunate enough to have bought the game. Load and reset as usual . . .
POKE 7927,12
SYS 14848

Why not try out these non-poke cheats from Jason Haymer?

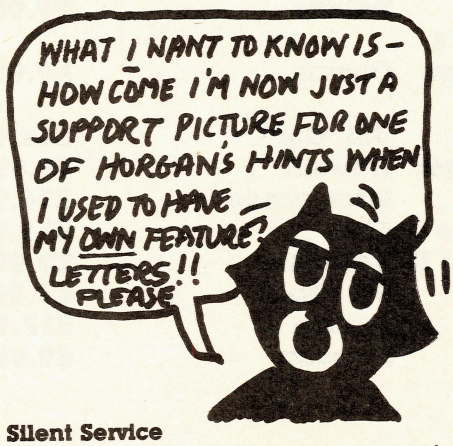
Championship Wrestling
If your opponent pins you, push forward on the joystick and hit the fire button as fast as possible. Not only will your opponent be thrown off but your energy zooms up as well!

Terra Cognita
Fly over the first extra life block, collect it and fly into the time shift. You'll be put back to the beginning. Carry on doing this until you have the maximum nine lives (Jason did include a pathetic joke about a cat here but I'll spare you it).

Ninja
Destroy the Denizens by weakening them with throwing stars and finishing them off with your sword. Kill the Karatekas by throwing stars at them, keeping a safe distance from them. Deal with the Evil Ninjas by using the high kick (don't try anything else).

Star Wars (Parker Bros. Cartridge)
This cheat is imcompatible with Domark's version but for anyone with the Parker Bros. version, type PARKER BROTHERS (including the space in between) for an amusing response.

Alleykat
This cheat does not always work on the dodge 'em races but is great for the others . . .
At the beginning of a race, fly to the right hand side of the screen and extend your wings. Shoot all the obstacles in your path for one lap only before flipping them back and accelerating to full speed for the remainder of the race. Most of the antikat craft should leave you alone (even Katerkiller) but it's advisable to keep shooting just in case.



Silent Service
To get a fresh set of torpedoes and shells at any time in the game, press shift and run/stop to break into it and then type RUN.

Wizard's Lair
Here are the codes for this recently re-released game of Atic Atac in the jungle.
CAIVE HAWLO
CRYPT DUNGN
VAULT LIAYR
LYONS

Goonies and Zorro
Jason Haymer's remedy for any C128 users unable to load either of these two games is to try loading them with CAPS LOCK depressed.

Ollies Follies
The code for level 19 is ZOOOM

Rock 'n' Wrestle
This method allows you to out-grapple any of the opponents: dash to the far right corner of the ring and turn to face your opponent. When he approaches you, kick him in the stomach until his energy is fully depleted. Now move around in front of him and when he faces you, grab him and give him a piledriver. Then jump on him and pin him down until he's out for the count. You may need to try this twice on some of the harder characters.

Mega Apocalypse
More Mega Apocalypse pokes? This one from David Cox is for a "mighty mega meaty apocalypse". Load and reset the game before entering:
POKE 53271,255
POKE 53277,255
SYS 22562

Grand Prix Simulator
David has been using the Action Replay cartridge for his pokes and has consequently not unearthed a restart address, so I'm afraid this one's for cartridge users only.

POKE 3418,171 (continuation of the music during level two and onwards, and during speech)
POKE 16452,171 (some visibility under the bridges)
POKE 4221,X (substitute X for a number between 250 and 255 for different music)

Vegas Jackpot
For an extra ten quid every time try out this poke (again only for those with an auto-restart cartridge).
POKE 20114,173

Ice Palace
Fancy invunerability from all the evil beings and flying swords? Of course you do, so reset the game and poke it like so:
POKE 12755,173
POKE 13416,173
Sorry, no restart address again!

That's your lot for this month,

Tony Horgan
HORGAN'S HINTS
CCI
40 BOWLING GREEN LANE
LONDON EC1R ONE

COMMODORE MUSIC EXPANSION SYSTEM

only **£79.95** (while stocks last)

We now have stocks of the original Commodore Music Expansion System for the C64 and C128 available. This amazing kit comprises:

- 5-Octave Keyboard
- Sound Expander FM digital hardware
- Sound Studio synthesiser & recording software
- Music Maker II software

Incredible music and sounds from your C64 or C128!

Amiga Interface for keyboard only £49.95!

As above without keyboard only £24.95!

Power Computing

44 a&b Stanley Street • Bedford • MK41 7RW • Tel: 0234 273000

Cheques/POs to: Power Computing. We take Access & Visa

A R B

Computers

A500 Games Pack
Workbench, Extras, Tutorial Disk
Handbook, Basic Manual,TV Modulator
Karate Kid II, Goldrunner, Skyfighter,
Demolition, Gridstart, 4 PD Disk's
Quickshot Joystick
ONLY!! £399.00

A500 + A1084 Colour Monitor
As Above
Only !!£649.00

Surrey ***AMIGA*** Owners
A Full Range of Software and Hardware Always in Stock.
Please feel free to drop in for a chat ,and to see what is happening in the exiting world of the AMIGA.

6, The Broadway
Kingston Road
Staines
Middlesex
TW18 4LG
Telephone 0784 60679

OFFICIAL COMMODORE/AMIGA DEALER

COMPUTERS	
Amiga 2000 only	976.35
Amiga 2000 + 1084 Colour Monitor	1229.35
Amiga 2088 PC/XT Bridgeboard + 5.25" Drive	481.85
Amiga 500 inc Modulator	359.00
Amiga 500 Superpack — Modul/Joystick/Games/PD Disks	399.00
Amiga 500 + 1084S Stereo Col Mon	609.00
Commodore 128D Desktop	379.00
COMMODORE 64C PACKS	
Home Entertainment Pack with Yamaha Kbrd (25 Styles, 25 Voices etc) + Personal Stereo + C2N + Joy + Games	189.00
Hollywood Pack with C2N + Joy + 10 Games	139.99
PRINTERS	
Citizen 120D Parallel or Commodore	129.95
Star LC-10 Parallel or Commodore	219.00
Star LC-10 Parallel or Commodre Colour	249.00
Star LC24-10 24 pin Multi-font 170/57cps	329.00
MONITORS	
Commodore 1084 Colour Monitor inc lead	259.00
Philips 8833 Stereo Colour Monitor inc lead	259.00
Philips 7502 Green Screen Monitor	85.00
MISCELLANEOUS	
Amiga 501 512K RAM/Clock Expansion	139.00
Pace Modem + S/ware for Amiga V21/23 Prestel, BBS etc.	239.00
Commodre 1541-II Disk Drive (NEW)	159.00
Commodore 1571 Disk Drive	189.00
Commodore 1581 3.5" Disk Drive	189.00
Commodore C2N Data Recorder	29.95
Cumana CAX354 Amiga Disk Drive	95.00
Power Supply for C64	26.45
Super-G Cent I/F + Graphics C64/128	34.95
Surge Protector 13A Plug	12.95
Surge Protector 3-Way Adaptor of 4-Way Dist Unit	15.95
Amiga DOS Reference Manual	22.95
C128 Official Prog's Ref Guide p&p £2	18.95
SOFTWARE	
Superbase Personal	49.99
VizaWrite 128 + Spellcheck	59.95
VizaStar 128 Spreadsheet & Database	79.95
Superbase 64/128	24.95/29.95
Superscript 64/128	24.95/29.95
Tasword 64 40/80 Col WP — Tape/Disk	24.95/24.95

ALL PRICES ARE INCLUSIVE OF VAT AT 15%
CARRIAGE £5 (EXPRESS £10) Software and small items free
Prices subject to change without notice E&OE

Delta Pi Software Ltd

8 Runswarp Lane, WHITBY, N. Yorks. YO2 1ND.
Tel: 0947 600065 (9am-7pm)

R. & A.J. PRESTON

Commodre Plus 4 Computer C2N 1531 Tape Deck, Joystick, 10 Games **£55**

Commodore C16 Computer C2N 1531 Tape Deck, Joystick, 4 Games **£55**

C64 Cluedo, Monopoly, Scrabble, 3 Cassettes..... **£3.50**

C64 C2N Tape Deck..... **£18**

C64 Music Maker **£4.95**

C16 Joystick..... **£3.95**

C16 Tape Deck 1531..... **£18**

C64 Neos Mouse + Cheese..... **£15**

C64 Reset Switch..... **£4.95**

All Prices include V.A.T. Post free over £20 under £20 please add £1.

Access, Visa

R. & A.J. Preston

Kings Hall Court, St. Brides Major, Mid Glam. Phone 0656 880965

See us on Stand 101 at the Commodore Show in Novotel.

G.M.

WHY G.M.?

If you're a warrior or a warlock, an elf lord or an enchantress, then this brand new magazine is just what the dungeonmaster ordered.

G.M. is, quite simply, the biggest thing to hit the fantasy role-playing scene since Gary Gygax sat down and invented the game that started it all, *Dungeons and Dragons*.

You may have seen other fantasy gaming magazines – but none has offered the comprehensive and independent coverage you'll come to expect from *G.M.*.

For the first time ALL aspects of fantasy role-playing will be brought together between two covers!

You'll read about computer adventures, play-by-mail, board games, live role-playing in dark dungeons, game books, fantasy miniatures – if it's fantasy you'll find it in *G.M.*.

If you are an established games player you have probably been enjoying RPGs since *Dungeons and Dragons* first appeared in 1974. And you've probably been waiting just as long for a magazine that covers the ENTIRE fantasy gaming scene. *G.M.* is it!

You could be catching the fantasy bug for the first time and looking for a magazine that gives an independent view of the role-playing scene. *G.M.* is it!

G.M. will be essential reading for the enthusiast and the player new to the wonderful world of fantasy role-playing.

G.M.'s editorial team has quite a pedigree.

- There's **Tim Metcalfe** and **Paul Boughton** – the people who made *Computer and Video Games* the UK's number one best selling computer games magazine.
- Then there's **Wayne** – president of the *British Play By Mail Player's Association* and a leading fantasy gaming writer. You'll have seen his words of wisdom in magazines like *The Adventurer* and *Computer and Video Games*.
- Plus a top team of contributors, including ex-editor of *White Dwarf* Jon Sutherland and leading fantasy authors like Joe Dever.

You stand at the gateway to a whole new world – we dare you to take that first step into the unknown!

G.M. G.M. G.M. G.M. G.M. G.M.

- Cheques/postal orders should be made payable to Croftward Ltd

Name _____

Address _____

_____

_____ Post Code _____

Telephone (home) _____ business _____

Signed _____

Date subscription to commence _____

G.M.

SUBSCRIBE NOW!

To: Subscriptions Manager, *GM*,
120-126 Lavender Ave,
Mitcham, Surrey CR4 3HP.

Please send me 12 issues of *GM*.

- Cheque enclosed ☐

Please debit my Access no:

☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐

Subscription rates
UK: £16.50
Europe: £26.50
Outside Europe: £39.50

FOR A LONGER LASTING, SENSORY BLASTING, EARTH SHATTERING EXPERIENCE...

CBM 64/128
£9.99 CASSETTE
£14.99 DISK

SPECTRUM 128 ONLY
CASSETTE £7.99
DISK £12.99

Screen shots from CBM 64/128 and Spectrum versions.

...GET YOUR TEETH INTO...

"THE MUNCHER"

COMPUTER GAME

EVEN TASTIER THAN St PAUL'S

GREMLIN GRAPHICS SOFTWARE LTD. ALPHA HOUSE, 10 CARVER STREET, SHEFFIELD S1 4FS. TEL: 0742 753423

Epyx

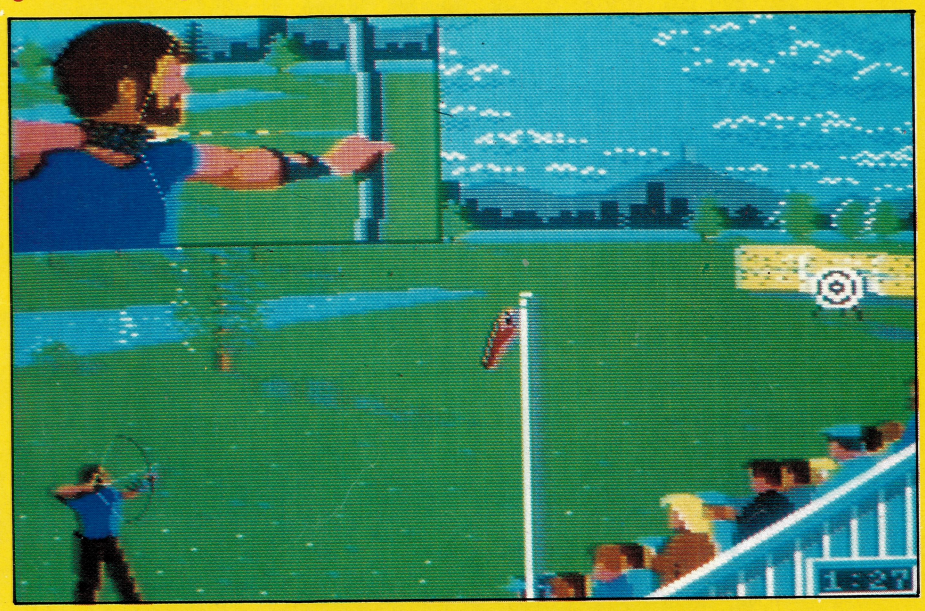
THE G MEGA SUM EDIT

Contrary to what you may think, there is still life in the old Track and Field theme, as Epyx have proven with yet another excellent multi-player sports simulation.

Unlike some of their rivals, Epyx have not cut corners with the number of events included in the game. There are eight in all: archery, cycling, diving, hammer throw, hurdles, pole vault, rings and uneven parallel bars. Some have been done before, but the new versions are all different enough for Summer Edition to be a whole new game in itself.

The essential ingredient in every one of the Epyx Games series is the multi-player feature. As usual, up to eight players can compete in all or a selection of the events, each representing one of eighteen countries. A practice option has not been forgotten, handy for beginners and messing around with your favourite events.

Tackling the games in alphabetical order, we start with Archery. From the view-point in the grandstand you can see yourself facing a target 90 metres away. A window in the top left corner of the screen provides a close up view allowing you to set the precise tension of the bow. Paying close attention to the wind sock, your next task is to line up the sight of the bow with the target before releasing the arrow. The wind speed and direction is a little too irratic, emphasising the luck factor, but in general is very realistic.



Cycling returns to the old waggle technique to simulate this 1000 metre race. A couple of windows on the left display the 3D views from behind each racer, while a plan of the circuit to the right keeps track of the players' positions. Up and down build speed, left and right steer the bike.

The solid 3D views work convincingly enough, again givin gthe game a touch more realism than the usual horizontally-scrolling format.

Another of the events we have seen before is the diving. Board tension can be adjusted for various heights of dive. Select a forward or backward dive and the competitor walks to the end of the board and leaps off. Combinations of joystick and firebutton are used to send the diver spinning and rolling through the air, entering the water with the minimum splash.

"Throw the hammer too early or late and it goes no further than the surrounding fence. Hang on to it and you are launched into the air, still clinging to the hammer!"

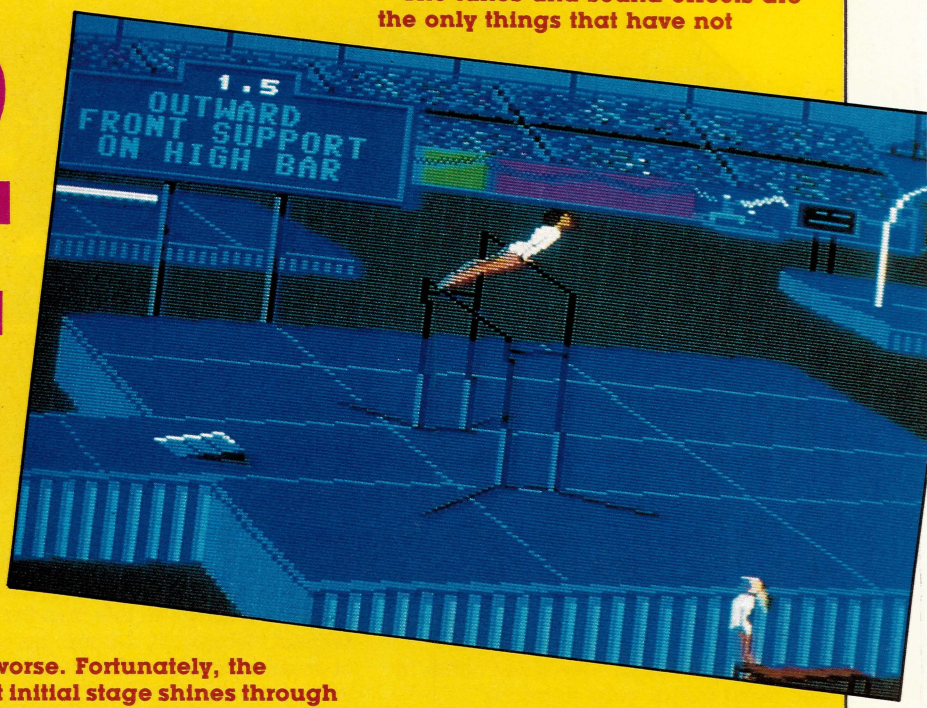
Humour always plays a big part in these games and is most prominent in the hammer throw. Not only that, it has some of the most convincing animation ever seen. A large character limbers up in the cage. Moving the stick through all eight positions in an anti-clockwise motion, speed is built up in preparation for the revolve stage. Keep circling the stick throughout the second phase until you reach the perfect release point. Press the button and kiss goodbye to the hammer as you watch it sail into the distance. Throw the hammer to early or late and it goes no further than the surrounding fence. Hang on to it and you are launched into the air, still clinging to the hammer!

AMES: MER TION

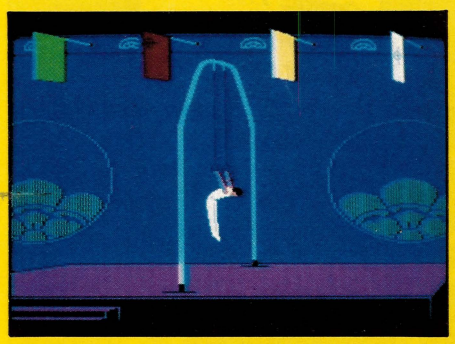
It is reassuring to see Epyx have not lost their unique talents, a fear induced by the disappointment of The Games: Winter Edition. In places, the gymnastic events and hammer throw in particular, the graphics are some of the most realistic I have ever seen. Not only that, there is not a hint of blockiness in any of the major sprites.

The tunes and sound effects are the only things that have not progressed since the early days. There is something about these games that makes them favourites not only for dedicated gamers, but novices as well. Round up a few friends, gamers or otherwise, and disprove the belief that computer gaming is anti-social. Epyx are really back on form.

T.H.



Nothing too adventurous has been attempted with the hurdles, raced across a horizontally-scrolling track. Hold the fire button the blocks and release it as soon as you hear the starter's gun. Waggle the stick for speed and use the button to clear the hurdles; the longer you hold the button, the better chance you have of avoiding a fall. To balance this out, longer jumps tire the runner more than usual.

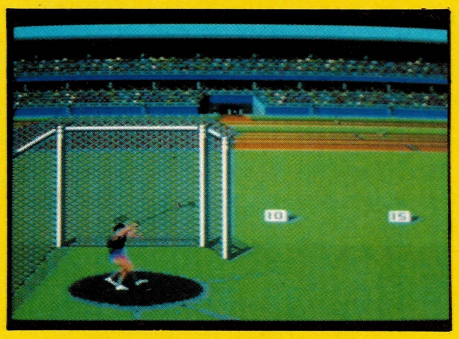


One of the strangest, but most effective new twists is in the run-up to the pole vault. The view point is situated above and in front of the athlete as he approaches the bar. Moving the stick left and right in time with his feet controls the speed before the view switches to a more conventional 2D side-on angle. This is surprisingly bland and blocky with wobbly scrolling to make things worse. Fortunately, the brilliant initial stage shines through and covers up this oversight.

An event you would not expect to find is the rings. Control of your gymnast is accomplished by continually waggling the stick either up and down or from side to side. However, there is more to it than frantic stick waggling. A rather bewildering diagram explains which move follows on from which so you can plan out your routine in advance.

"In places, the gymnastic events and hammer throw in particular, the graphics are some of the most realistic I have ever seen."

Lastly there is the uneven parallel bars. A similar diagram to that of the rings (but even more complex) outlines all the possible sequences of moves. Understandably, the sprite animation is not totally smooth, but the accuracy of the graphics makes this amazingly realistic to watch.



Graphics: 92%
Sound: 53%
Playability: 88%
Overall: 89%
Rating: MEGA
Price: £9.99 (c)
£14.99 (d)

C64

CRISP

Hewson

CYBERNOID II

Thought you put an end to the mean space pirates in Cybernoid I? No such luck! They have regenerated their resources and built a new Battlestar. Once again the Federation storage depots were their target, and going on your reputation from the first mission you have been voted the man for the job again (why do they always assume you completed the first game when most people probably only got about half way there?).

In the rebuilding of the Battlestar, the enemy have developed some new defences as well as making the whole thing bigger. As before, the Battlestar is split into small sections, each one taking up a screen. Obstacles come in two main forms: your standard electrified aliens and more heavily armoured defences bolted onto walls. The alien pirates are laden with stolen goods stored in indestructable canisters. Fortunately for you, that means any cargos can be picked up from destroyed aliens and added to your own ship.

What sets Cybernoid II apart from its rivals is its abundance of giant destructable defences. These are immune to laser shots, but explode violently when on the receiving end of a bomb or missile. Your ship is fitted out with an array of weapons with which to fight the alien slime: bombs, mines, bouncing bombs, smarts, seekers and tracers that see to 80% of alien attack. The remaining 20% are robots that follow predictable paths that can often be anticipated and evaded. Some however are unavoidable, so your shields are called upon for protection. Shields are the most limited of all the add-ons and careful planning is needed as only one can be carried at a time.

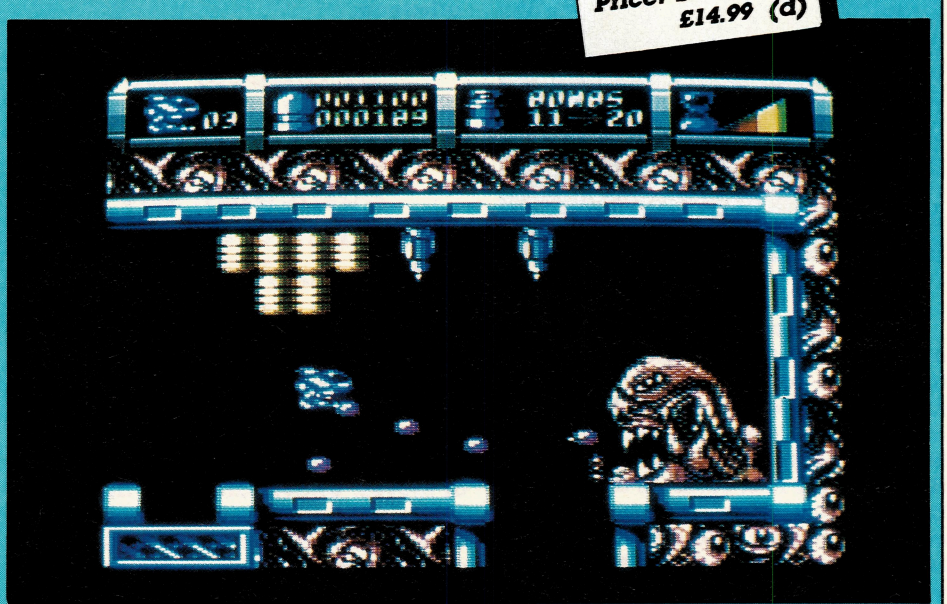
Every screen has its own problems. Initially they concern dodging the aliens and getting out alive but the furthr you get into the game, the more puzzling the screen designs become, demanding a bit of thought as well as lightning reflexes.

Cybernoid II has some of the most satisfying killable graphics ever seen in a computer game. Unfortunately, the graphics are about the only noticable difference between this and the original Cybernoid. A common critisism of sequels is their absence of new ideas, one that I put to Cybernoid II as its main drawback. Its difficulty seems a bit on the tough side to begin with, but stick with it and you do find yourself consistently getting that little bit further with each game.

A choice of sound effects would have given the game a wider appeal; the music is very pleasant but in a game such as this, effects are often far more appropriate. Still, Cybernoid II bears all the trademarks of a Hewson zapper: slick programming, spectacular graphics and demanding gameplay. If you expected a substantial progression from Cybernoid I you could be disappointed with the sequel. If on the other hand you bought the original and hunger for a second helping, this is definitely the game for you.

T.H.

Graphics: 92%
Sound: 75%
Playability: 79%
Overall: 77%
Rating: CRISP
Price: £9.99 (c)
£14.99 (d)



C64

DODGY

TYPHOON

Imagine

While most software houses are trying to convince us that their products are the fastest, biggest, most exhilerating games on Earth, Imagine are content to describe Typhoon as a mere simulation of such a game. As with all simulations, 100% accuacy is never possible, and in the case of Typhoon they do not seem to have got near 100% of compulsion and excitement.

Mechanoid invaders have arried and plan to take over the world. You begin your mission to destroy them high above the sea in an F-14 fighter plane. Wasting no time you enter a vertical dive through the clouds with your sights set on the enemy carrier below. Groups of fighter planes shoot through the clouds in the same tired old formations seen so many times before. Two weapons are activated by the fire button: standard short-range cannons and bombs released from beneath the plane. The effect of zooming through the clouds works fairly well but could do with a bit more speed.

Stage one is pretty boring stuff, the only thing of interest is the 3D view. All the enemy planes are identical and strangely yours banks in the wrong direction when moving from side to side. Soon enough you get to the carrier. Blow it up and the second stage loads in.

Your F-14 from the first part has now transformed into a helicopter for stage two. Instead of improving, Typhoon takes a step backward here. Now your enemies come at you from a vertically scrolling seascape. The blocky choppers and planes move around the screen totally unrealistically above equally poorly defined backgrounds. Extra weapons can be picked up to give the action a slight boost.

I am surprised Imagine bothered to convert this little-known coin-op when it does not even have any decent gameplay to compensate for its obscurity. It looks as if the programmers were turned off by the original game going by the conversion's drab title screen and make-shift graphics. The music is just a rearrangement of often-used voices, the alternative to which is a selection of unoriginal sound effects.

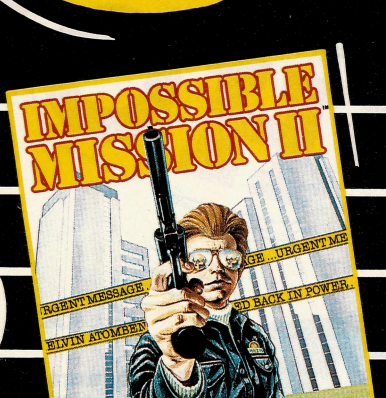
In both sections the screen has been cut down to a square shape, reducing the playing area unnecessarily. Expecting people to shell out a tenner and be satisfied with this is extremely optimistic. We do not want any more sub-standard vertically scrolling shoot 'em ups, please!

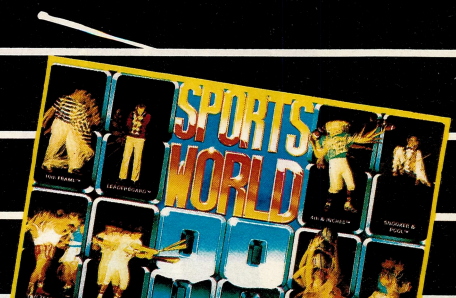
T.H.

Graphics: 42%
Sound: 65%
Playability: 38%
Overall: 39%
Rating: DODGY
Price: £9.99 (c)
£14.99 (d)

"CE"

"CELE





"GOOD

"GOOD

"C'M

U.S. GOLD®

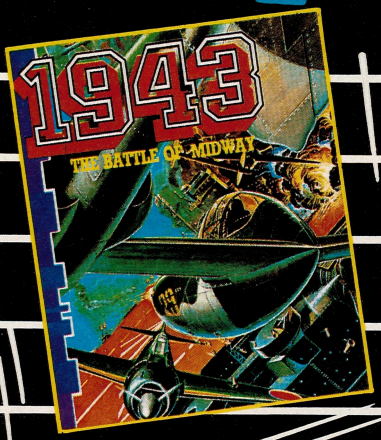
1988 – ANOTHER YEAR WAY AHEAD OF WHOEVER IS NO 2 ... YET

U.S. Gold Ltd, Units 2/3, Holford

BRATE"

TIMES"

TIMES"



ON!"

AGAIN TOP OF THE CBM 64/128, SPECTRUM AND AMSTRAD CHARTS.

U.S. GOLD

Way, Holford, Birmingham, B6 7AX

C64

DODGY

US Gold

MAD MIX

Why do software houses insist on constantly re-hasing old ideas and dressing them up as something new? If someone decides to write a Breakout, Space Invaders or Pacman clone, at least they should have the honesty to make it clear to the buyer what the game is really about. Pacmania for example has a picture of Pac leaping around a ghost-filled maze on its cover, which together with the name make it obvious that it's a Pacman progression. That's fine, no-one is being trickled into thinking they are getting something more than they really are. The problem arises when a game like Mad Mix comes along and attempts to cover up the fact that it's just a plain Pacman clone.

Pac has been replaced by a similar blob going by the name of Mad. A feeble excuse for a storyline tells of how Pepsivillage has been overrun by ghosts (notice the subtle Pepsi plug there?) and you, Pepsiman (there goes another) are the only villager up to the job of de-spooking the place.

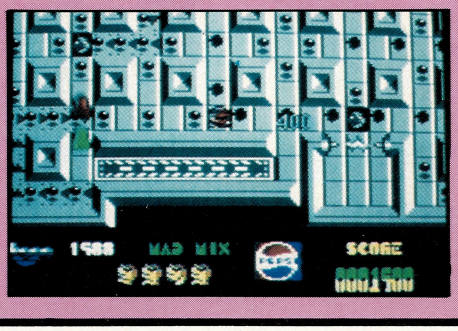
"Powerpills are found in certain places which turn Pepsiman into Angry Pepsiman for a short while, allowing him to eat the ghosts"

Of course, this entails walking round a maze, eating all the dots and for most of the time, steering clear of the ghosts. Powerpills are found in certain places which turn Pepsiman into Angry Pepsiman for a short while, allowing him to eat the ghosts. A similar pill turns him into a Pepspipotamus, giving him the chance to stomp all over the ghosts, but until its effect wears off, no more dots can be eaten. Tanks and spaceships can be boarded and moved along short fixed rails while you take pot shots at the ghosts.

One-way doors and conveyor belt effects have been included to relieve a little of the tedium brought about by the basic maze designs. Clearing one maze takes you onto the next which usually has a marginal increase in complexity and a new colour system.

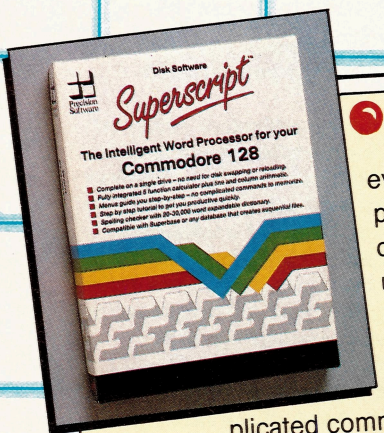
I can see no reason why anyone should choose Mad Mix in preference to Grandslam's Pacmania. Then again, neither fill me with excitement; I had enough of Pacman in my distant ZX81 and Spectrum owning days when almost every other game released had a title like "Maze Guzzler" or "Specman". There will be those who feel differently, but even so, Mad Mix is far from the ideal Pac variant.

T.H.



Graphics: 36%
Sound: 44%
Playability: 31%
Overall: 35%
Rating: DODGY
Price: £7.99 (c)
£11.99 (d)

The most powerful productivity software ever developed for your computer

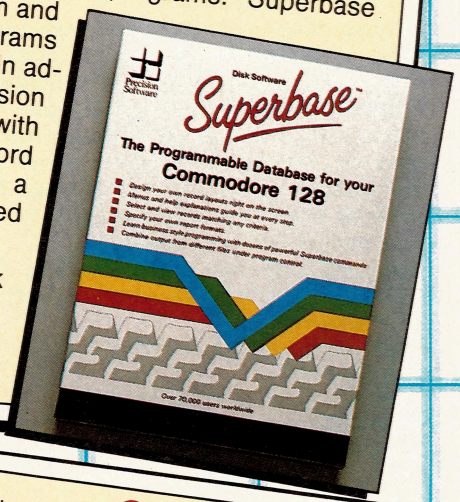


SuperScript gives you everything you need for professional word processing in one easy to use package. Its menu command structure puts you immediately at ease, with no complicated commands to memorise, yet SuperScript combines business-style editing, spell checking, calculator, row and column arithmetic and full mail merge facilities. The phrase glossary feature enables you to store whole passages of text, or command sequences and recall them with a simple key.

Commodore 64 disk **£24.95**
Commodore 128 disk **£29.95**

Superbase is the most powerful database system ever developed for 8 bit computers. Why? Because not only can you access its commands from menus but you can string them together with BASIC commands to form your own complete programs. Superbase can import data from and export to other programs via sequential files. In addition the C-128 version will load together with the SuperScript word processor to create a completely integrated office system.

Commodore 64 disk **£24.95**
Commodore 128 disk **£29.95**

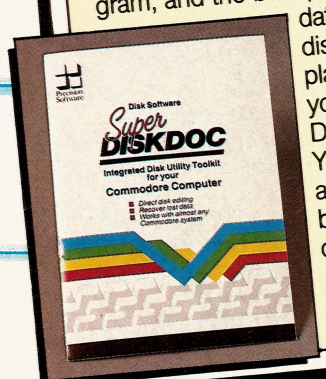


The in-depth guide to using the Superbase system, from first steps through to advanced programming techniques. The wealth of hints, tips and practical examples makes *Superbase*: The Book required reading for anyone working or contemplating working with Superbase.

194 pages **£11.95**

SuperDiskdoc is the ultimate Commodore disk utility program, and the best protection there is for your valuable data. Zoom in on the bytes on your disk, interpret them in hex, ascii or plain English, make any changes you want, then replace them. Superdiskdoc brings you extra security. You know that in the event of an accident to your data you have the best tool available to repair the damage.

Commodore disk **£9.95**



ORDER FORM

Mail to: Precision Software Limited,
6 Park Terrace, Worcester Park, Surrey KT4 7JZ

Please send me: _____

_____

Free Post and Packaging within the UK.

☐ Cheque enclosed ☐ Visa ☐ Access/Mastercard

Credit Card Number ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐

Expiry Date _____ Signature _____

Name _____

Address _____

_____ Post Code _____

14 Day Money Back Guarantee – Return your package unopened and we will refund your purchase price.

CCI

Precision Software

Precision Software Ltd. 6 Park Terrace,
Worcester Park, Surrey KT4 7JZ
Telex: 8955021 Precis G Fax: 01-330 2089

Phone for our catalogue: 01-330 7166

DEATH

Here is my problem... I've been given a task by the ninth Emporer of the Kingdom of Kodan; to wipe out the Evil that is devastating his once-peaceful lands. I got my party of brave warriors together and set out with bold resolution, secure in the knowledge that I, and my friends, would succeed where all others had failed.

We quickly discovered, and entered, the town of Kawa where we heard the first whisperings about "the seven words" that we had to find. Our world is huge. Where will we find "the words"? How will we cross the oceans? But, more immediately, how am I going to survive? Of my original party of five, only two of us remain!

Three died in our first fight, with a band of marauding brigands. Now only Dove remains with me, and she is slowly dying from a venomous snake bite, her strength failing her even as I watch! Although we are now hidden in the ruins at Wakiza I am sure it will be only a matter of time before those grotesque skeletons discover our trail again. I wish now that I had chosen my party more wisely...

Still, I suppose I could always start again!!

Every now and then, a game comes along that takes you completely by surprise.

In this case it is one called "DEATHLORD", written by Al Escudero and David Wong and released by Electronic Arts. The surprise came the day AFTER I first looked at it...

I was travelling home on that well-known sardine-packing factory, thinking about different ways to form a party of adventures that might be more successful. What skills I would give them. Whether to have more magicians, or fighters. How many to have in the party. For me that WAS a surprise as no "Adventure Game" had ever set me thinking THAT much before!!

The basic scenario is this: Lorn was once a nice peaceful place until an outcast wizard decides to change things. Now it knows only evil. The Kingdom of Kodan's second city has been destroyed and the ninth Emperor has had enough! And guess who has the job of sorting it all out? Your task in Deathlord is to identify and defeat the source of evil. To do this, you will need to collect clues and articles. You will also have to gather together a party of fellow adventurers, and gain strength and knowledge to help you in your quest.

Assembling an effective party of characters is essential if you want to be successful. Each party can have between one and six members. You can form a number of different parties and save them to disk. Each member of the party is chosen from an amazing array of characteristics and attributes, including race, class, alignment and sex.

There are eight classes of race to choose from, each class having its own unique style: TOSHIs are physically weak, but they are intelligent and have long lives, whilst TROLLs are "homely humanoids" that are "strong but fairly slow-witted for spell casting".

All characters have seven mental and physical attributes which range in value from three to twenty-one, strength, constitution, size, intelligence, dexterity, charisma and power.

Sixteen different CLASSES of character are available to you, from Anasatsusha to Yakuza. Once again, each different class of adventurer has different skills and abilities, wears differing amounts of armour and is able to use a variety of weapons and/or magic.

For example, the SENSHI is "the ultimate mercenary", who can "wear any armour and use any weapon", whilst the SHIZEN will draw on nature to cast spells but, "metal armour cuts their casting power, so they usually don leather armour".

Other factors include the number and type of weapons, how many hit points and the amount of armour for each class. Plus, whether a particular class is actually available in the race that you have chosen, (eg. Gnomes cannot be Samurai), and whether each member will benefit the others. A mix of fighters and magicians is recommended.

As you can probably tell, the setting-up of your party can be

HLORD

Electronic Arts

quite a difficult and time-consuming business, so there is a ready-to-go team provided to get you started. My first happy band lasted about an hour before I'd managed to get them all killed off!!

Once your party is complete, you are ready to begin your quest.

The two writers of Deathlord obviously spent a huge amount of time thinking through how the characters should be prepared. They apparently spent and equal amount of time on the actual play area. It is VAST! There are SIXTEEN levels of Dungeon with "acid pits, fire, invisible, doors, magic curtins" and special crystals to be found. And if that isn't enough, there are a few monsters to be faced, 128 different kinds!!

During play, the screen is split into five distinct areas, the largest being a map of your local area. The others are "action" and "re-action" windows, player information and time of day/night. All commands are entered with single key-presses and the program assumes that the party leader is performing the action unless you indicate otherwise.

Other than movement commands, (N,S,E,W), most others require a second input for clarification. For example, if you wish to "get" an item you will press the letter "G", then the direction you wish to "get" from. There are over forty different commands in total and they seem to account for most things, including talking, searching, buying and selling, and the all-important fighting (with both magic and weapons). A very helpful feature has been included that allows you to define up to four "macros". A macro is a string of commands that can be executed by a single key stroke and can be invaluable if you get involved in heavy fighting, when you won't have any time to waste. When the fighting starts, if you aren't ready, you don't last long!!

The map display uses icons to show your position and any other presence nearby. The backgrounds are fairly simple and depict forests, swamps, oceans, towns etc.. Although the display is fairly "basic", I found that it did not detract from the game at all. If anything, it keeps it all obvious and uncluttered.

Deathlord is supplied on two disks and the first thing you have to do, before playing, is to use two more blank ones to create the scenario/character disks that the game requires. The sample copy I received was packaged in a card folder. I hope that Electronic Arts re-package it into their usual "box", if only so that dealers are more likely to turn it face-out on their shelves to let people see the Dave McMacken picture on the front!!

It seems that, at last, software companies have caught on to the fact that there is a very great interest in this type of "role-playing" game. The next few months should see the release of many more of them.

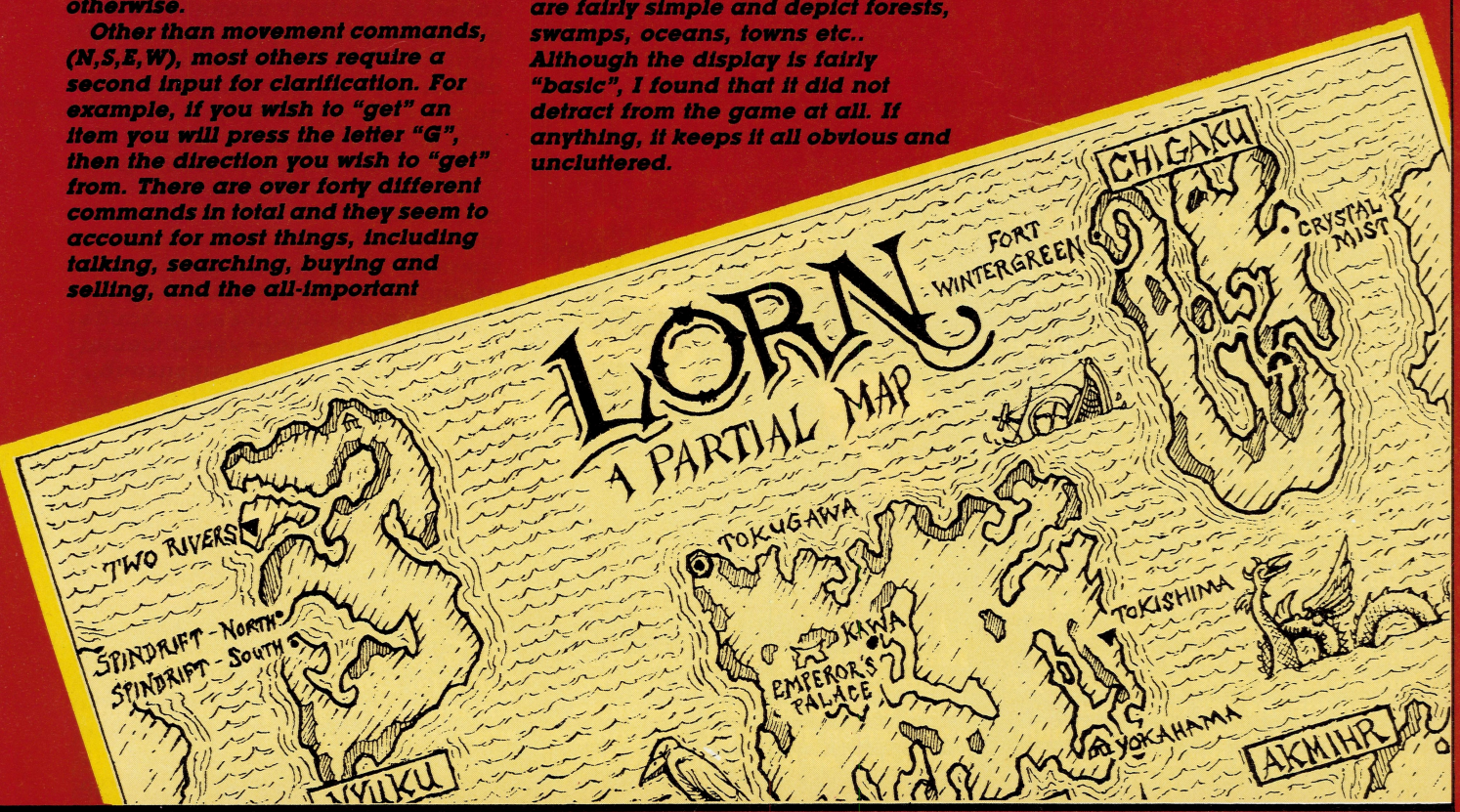
As for Deathlord, it will not appeal to everybody and its complexity may well put a few people off. But if you fancy a bit of "sword & sorcery" and a game that will keep you engrossed for many hours, then this comes highly recommended.

Right, now where can I find a magician who will heal Dove for me?

PS. If you would like to know more about "role-playing" in general, check out our sister publication the new "Independent Fantasy Roleplaying Magazine" called GM.

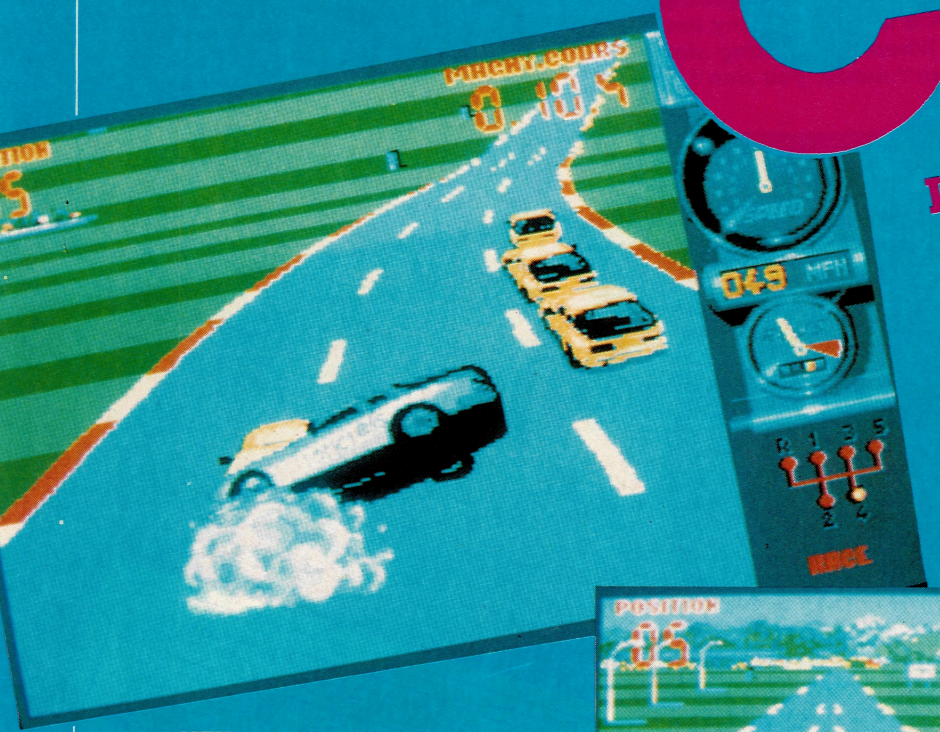
N.S.

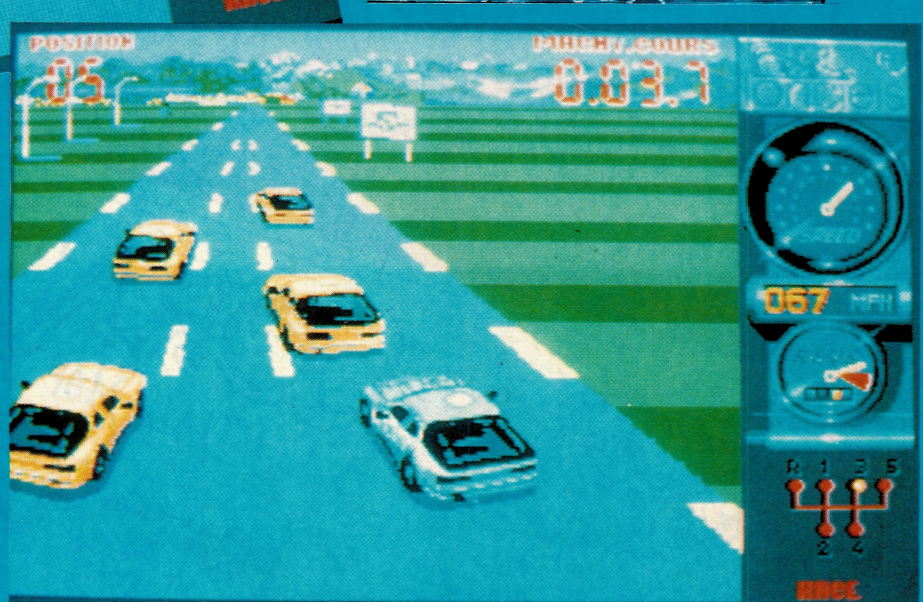
PERSONAL RATING 9



TURBO CUP

Loriciels





UNTIL now the situation concerning racing games on the Amiga was hardly eventful. Now Outrun has surfaced at last, things seem to be picking up, and it gets better . . .

France-based Loriciels are about to launch Turbo Cup, a realistic simulation of Porsche 944 Turbo racing on four circuits from aroud la belle France. Choice of automatic, standard or realistic gearboxes break you into the game while the solo practice lap determines your position on the grid.

Opposing cars jossle for position as they burn rubber on the grid and often make rash decisions, so be careful! A knock from a rival Porsche could send you into a spin or even flip the car right over. Grandstands, road signs and hills make for one of the most realistic simulations outside the arcades.

Superb graphics round off what could well be the best race game ever seen on an Amiga. The game is being sold on its own for £19.95 or with a quality replica of the 944 Turbo for £24.95. Look out for it coming your way very soon . . . and when it comes, go for it!

T.H.

CERTAINLY THE BEST ARCADE GAMES IN THE WORLD NOW FOR YOUR HOME FROM £14.95

SEGA MASTERSYSTEM™ FROM £79.95

(Includes: Mastersystem · 2 Control Pads · Free Game 'Hang On')

SEGA MASTERSYSTEM PLUS™ FROM £99.95

(Includes: Mastersystem · 2 Control Pads · Light Phaser · Free Games 'Hang On' and 'Safari Hunt')

SUPERSYSTEM™ FROM £129.95

(Includes: Mastersystem · 2 Control Pads · Light Phaser · 3D Glasses · Free Game 'Missile Defense 3D'

Sega Products are available from leading stores of Woolworths, W.H. Smith, Dixons, John Menzies, Toys R Us, Kids Store, Toy and Hobby, Harrods, Selfridges, Virgin, Children's World, Morrisons, Hamleys and your local computer dealers.

Distributed in the U.K. by Mastertronic Ltd., 2/4 Vernon Yard, Portobello Road, London W11 2DX. Tel. 01-727 8070 Fax. 01-727 8965

C64

CRISP

PACMANIA

Grandslam

PAC's days of happy family life in the fairy tale world of Pacland are over. No more does he leap and bound through the villages and fields of that green and pleasant land. No, he thought he had kicked the habit but when he passed a maze full of those delicious little dots, his old addition returned, as strong as ever. In case you missed it the first time round (or are still hungry from your early days), dot munching is back on the 64 with a vengence.

Pac, together with his trendy acidic looks, has gained a third dimension. Now the mazes are drawn in 3D and everything is bigger and bolder than before, meaning that the backgrounds are too much for a single screen and scroll in four directions. There is a choice of three levels to begin with: Block Town, Pacman's Park and Sandbox Land. It also teases you with the fourth level, Jungly Steps, but this has to be reached through the earlier worlds.

Just as before, the idea is pig down all the dots, avoiding the deadly touch of the ghosts. Powerpills weaken the ghosts giving you some breathing space and the opportunity to eat them for bonus points. Your other defence is your ability to jump over the nasties, though on later levels this is combatted by jumping ghosts! From time to time extras appear under the ghosts' hideout which are collected for extra points, a very short-lived powerpill effect or turbo speed.

In his 64 guise, Pac looks a bit meaner than the wide-eyes beachball in the arcades. The ghosts and mazes are as good as can be expected, with a night-time option that (for seasons unknown) changes the background into Spectrum-style hires mode. All the scrolling is smooth but there is an annoying decrease in speed when moving up the screen. A selection of jolly (annoying) tunes accompany the guzzling.

Because of its new features, the turbo pills and different levels, Pacmania will hold out longer than a plain Pacman clone, but if you have had your fill of dots, this will not do much for you. Do we need Pacman in '88? If you think you do then why not give it a go, it's a lot better than US Gold's feeble Mad Mix. If on the other hand you prefer a more up-to-date game for your money look elsewhere. It's as simple as that. (We like it!)

T.H.

Graphics: 58%
Sound: 59%
Playability: 68%
Overall: 65%
Rating: CRISP
Price: £9.95 (cass)

Commodore Amiga

The Knight one of three character classes.

Atari ST

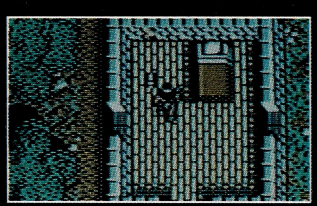
Converse through simple commands and menus.

DISCOVER AN ARCADE ADVENTURE WITH HIDDEN DEPTHS

Discover Times Of Lore, Origin's first adventure on cassette. Acclaimed British designer Chris Roberts has taken the best of arcade and adventure – fast and furious combat, stunning graphics and animation, unrelenting danger and challenge – and introduced the depth of a classic fantasy role playing game.

Entirely joystick driven, Times Of Lore continuously tests your combat skills while you gradually become involved in a compelling plot. With 13,000 screen locations, a powerful but easy-to-use menu and icon interface, scores of interactive characters and music by Martin Galway, it ventures further than other arcade adventures.

Origin have broken new ground in Times Of Lore. Isn't it time you did too? Available for: C64/128 Cassette £9.95, Disk £14.95, Spectrum 48/128K Cassette £9.95, Spectrum +3 Disk £14.95, Amstrad 464/6128 Cassette £9.95, Disk £14.95, Atari ST £24.95, IBM/PC & Compatibles £24.95, Apple £19.95, Commodore Amiga £24.95.



C64/128

Spectrum

Amstrad

Journey through an immense world of cities, dungeons, and a stunning variety of natural terrain.

ORIGIN

Origin, MicroProse, 2 Market Place, Tetbury, Glos, GL8 8DA. Tel: 0666 54326

C64

IFFY

Hotshot

Addictive

Not another Breakout clone? Well not quite, but Hotshot is hardly a revolution in game design. The easiest way to describe it is a cross between Breakout and that old future sport Bounces.

Two players takes part, both of which can be either human or computer controlled. Your character is chosen by the computer from a selection of five which are said to have differing characteristics. They do look different but all play very alike.

Your goal in each screen is not so much as to clear it of bricks but to amass as high a score as possible. Screen one is played against a time limit with a target score taking you onto the bonus and second screens. Depending on your character you will have either a gun or some form of snout that is used to control the ball. Holding the fire button attracts the ball so that you can catch it.

"Once you have the ball you can aim and shoot it back up, distorting its natural flight path with the gun."

Deaths occur from holding onto the ball for too long and being hit by it. Do not expect any big explosions or gory deaths, the players just glow and disappear. Each of the five levels vary more than your average Breakout clone and include features such as a pinball-style flippers and mushrooms.

Hotshot's graphics look as if they have come directly off a Spectrum. The sprites are nicely animated but could have had some more colour in them. Sound plays little part, just a blip as the ball hits an obstacle and a very plain title tune.

The two player mode increases its appeal, but it fails to create the level of rivalry and co-operation found in games like Gauntlet and Supersprint. When you tired of the normal game modes you can always select the same joystick for both players and have a two characters under your control at once.

Put beside other bat and ball games, Hotshot looks a bit puny. Everything is neat but there is no excitement to keep you at it. I can see Hotshot doing well as a budget title, though whether the limited entertainment on offer is worth a tenner is another matter.

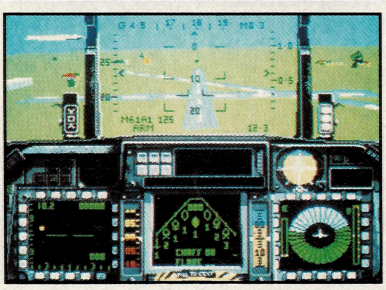
T.H.

Graphics: 43%
Sound: 30%
Playability: 39%
Overall: 40%
Rating: IFFY
Price: £9.99 (c)
£12.99 (d)

It is daybreak. You join the other pilots in the squadron crewroom to discuss objectives for the day ahead. Tactics, combat manoeuvres; all are captured completely by F-16 COMBAT PILOT. During your pre-flight briefing you instruct the ground crew on weapon loading and plan your attack...

The threat of imminent destruction and the stress of high-g combat you take in your stride. Your training perfected, you are now master in all five roles of the F-16, from air-to-air interception to interdictor strike.

F-16 COMBAT PILOT



Atari ST screen.

But now – Operation Conquest – the conflict you hoped would never happen. Aircraft, ground forces and the entire strategic infrastructure is under threat.

You haven't faced anything like this before...ever!

ORDER YOUR F-16 COMBAT PILOT NOW.
Simply phone (0276) 684959 quoting VISA or ACCESS credit card number, name and address.

BLACK BOX SIMULATION

Digital Integration
The Real World of Simulation

Digital Integration Limited,
Watchmoor Trade Centre,
Watchmoor Road, Camberley,
Surrey GU15 3AJ (0276) 684959.

ATARI ST – £24.95. **IBM** – £24.95. **C64** CASSETTE – £14.95. **C64** DISK – £19.95. AVAILABLE 1989: **SPECTRUM** CASSETTE – £14.95. **SPECTRUM** DISK £19.95. **AMSTRAD** CPC CASSETTE – £14.95. **AMSTRAD** CPC DISK – £19.95. **AMIGA** £24.95. **AMSTRAD** PCW – £19.95.

As another year sails gloriously into the history books, once more a much-sought-after CCI Oskar comes steaming up for grabs. The winners of these golden statuettes, awarded each year to the highest achievers in the world of Commodore computing, will not be known until the end of the year, but to whet your appetite here are some of the hottest entertainment contenders for the megastar like. . .

'88 – THE

Best Arcade-style Game

Most prominent of the year's arcade-style games (including conversions from arcade machines) is probably Palace's Barbarian II, one of the most vicious, bloody and grotesque games ever seen. Go! proved their worth when they brought the jolly but eerie platform-based playability of Bionic Commandos to 64 gamers. A mention must surely go to Grandslam for their brilliant work in

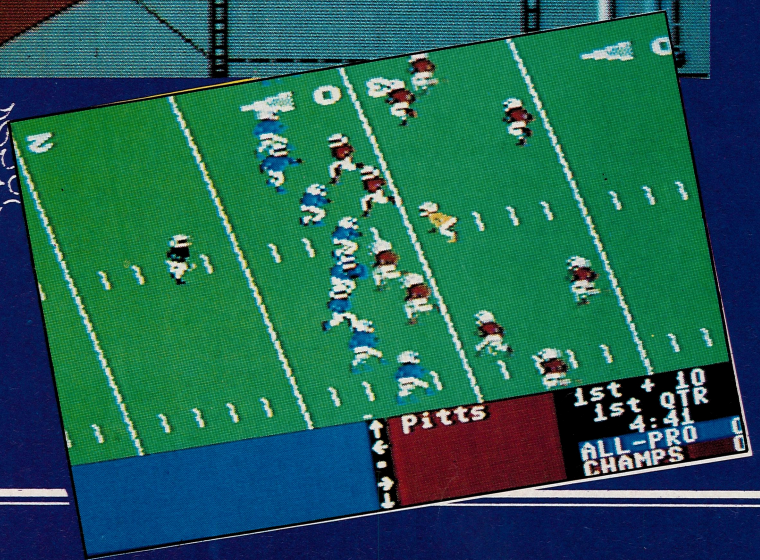
converting colourful coin-op Pacland.

Xenon, Virus, Sidewinder, Outrun, Sword of Sodan and Pacmania are just a few that have stunned Amiga gamers in '88.

Best Arcade Adventure

Competition is strong here. Although it only features mild adventure elements, Barbarian II is up there again. Another combining beat 'em up, exploration and puzzle solving was The Last Ninja II, but was it just a bit too similar to the first games? An adventure of a totally different kind, Captain Blood with its universe of conversant aliens and great depth has almost everything a space adventurer could wish for on! Martin Ocean's early '88 chart topper Platoon must

MEGASTARS!



come strongly into contention.

Rocket Ranger's exceptional standards in all departments make it a leader of the list, but we mustn't forget the incredibly absorbing Starglider II, Mercenary or Obliterator.

Best Sport Simulation

Football was definitely the software industry's favourite sport this year. Among the many footy games to appear, two have stood out from the rest. Just released ASL's fantastically realistic Emlyn Hughes' International Soccer may look like a clone of Commodore's crumbly classic International Soccer, but take the trouble to play it and you'll be in for a surprise! Sensible Software's unfortunately named Microprose Soccer makes the most of its contrasting bird's eye view (who needs an official World Cup coin-op conversion?). We mustn't forget The Games: Summer Edition and 4th & Inches, two quality sporting releases from the US Gold stable.

For the Amiga, no soccer sims have made the grade so far, but Daley Thompson's Olympic Challenge successfully revived the joystick waggle technique. The category is still wide open to challengers this Christmas.

Best Role Playing Game

RPG's, a breed of game that has for years been overshadowed by conventional adventure games are beginning to emerge as a fast growing alternative to the more traditional methods of goblin bashing. The arrival of the official Advanced Dungeons and Dragons computer game marks this development, but number five in the Ultima series and Times of Lore are putting up a strong challenge.

Bards Tale II and Ultima IV are among the favourites of Amiga role Players.

'88 – THE MEGASTARS!

Most Original Game

Originality is rare property in computer games, a very understanding situation but one from which we would all welcome a change. Even though the space exploration that forms the basis of Captain Blood is nothing new, the communication interface between player and alien is like nothing seen before, translating a number of alien languages into a choice of three European equivalents.

The presentation of Virus is unique, no-one seems to have the expertise needed to clone it! E.A.'s Battle Chess, could provide the competition.

Best Graphics

For its sick, tasteless and utterly delightful mutations and death sequences, Barbarian II gets another mention. Ninja II's accurately detailed and coloured visuals surpassed even those of Ninja I, not an achievement to be sniffed at. Both Cybernoid II and The Games: Summer Edition also have their fair share of graphical treats.

Starglider II's superb visuals are the next best thing to being there for Amiga users, equalled by the spectacular views above San Fransisco generated by Interceptor. Sword of Sodan's very arcade-like giant sprites could just be beaten by the detail and atmospheré of Rocket Ranger's stills and action screens.

Best Programmer (or team)

Cinemaware and The Bitmap Brothers (Xenon and Speedball) have proven their worth, but Argonaut Software are looking good with the success of Starglider II behind them and the imminent conversion of Afterburner promising great things. Teartel have made great job of the conversion of Thunderblade for U.S. gold and Ocean must come into the reckoning for overall quality through the year.

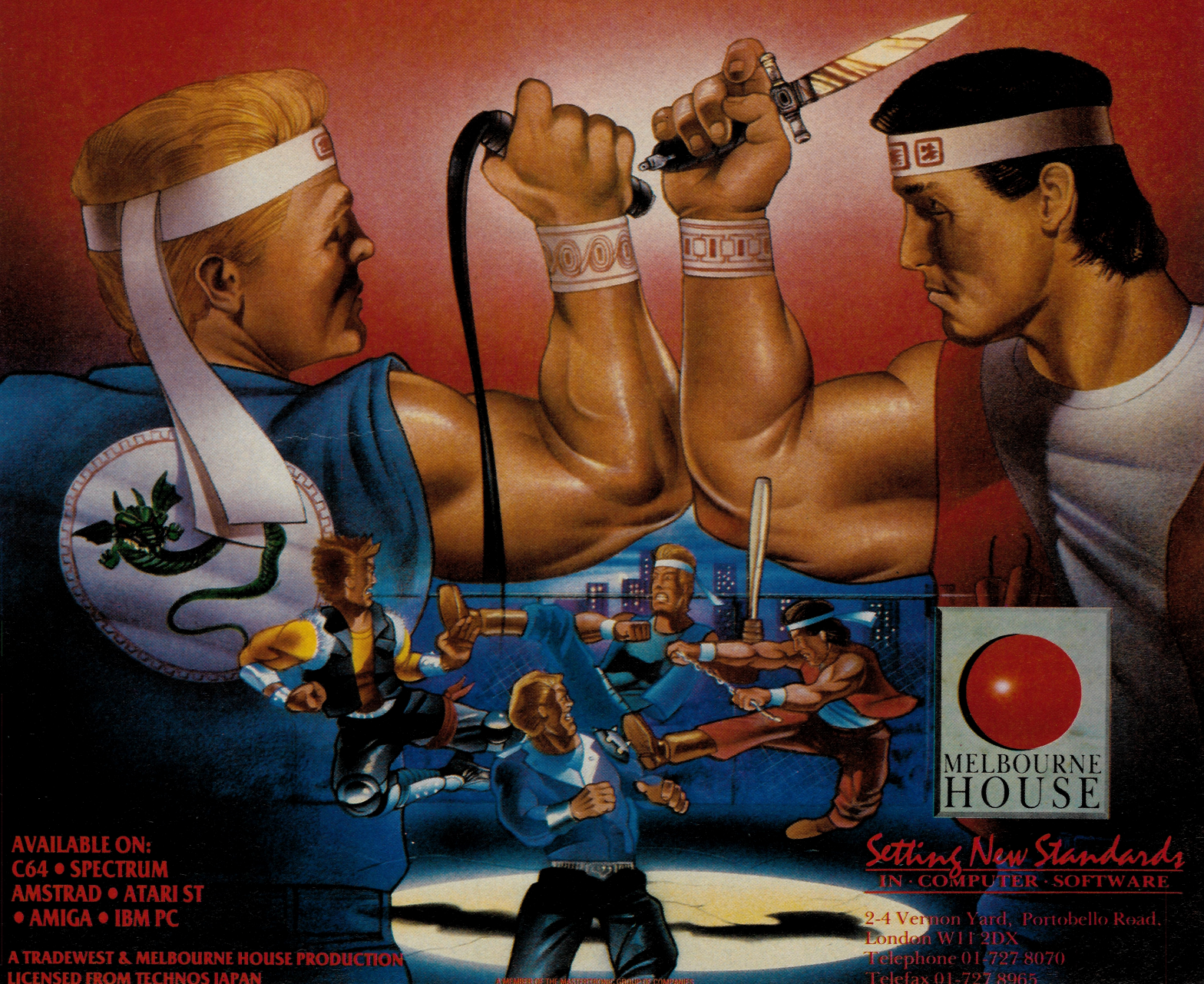
Best Shoot 'em Up

There has been no shortage of alien blasters in the last year. Sadly, one of the best so far, Katakis was withdrawn from the market after Mediagenic got shirty about its similarities to their licensed

NOW AVAILABLE FOR THE SEGA MASTERSYSTEM

DOUBLE DRAGON

THE ARCADE GAME OF THE YEAR



AVAILABLE ON:
C64 • SPECTRUM
AMSTRAD • ATARI ST
• AMIGA • IBM PC

A TRADEWEST & MELBOURNE HOUSE PRODUCTION
LICENSED FROM TECHNOS JAPAN

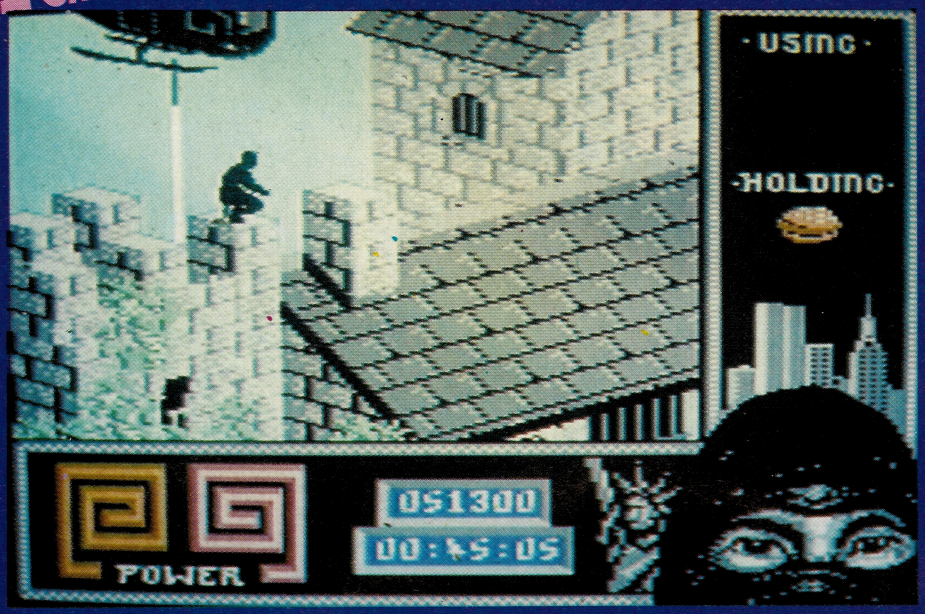
MELBOURNE HOUSE

Setting New Standards
IN · COMPUTER · SOFTWARE

2-4 Vernon Yard, Portobello Road,
London W11 2DX
Telephone 01-727 8070
Telefax 01-727 8965

A MEMBER OF THE MASTERTRONIC GROUP OF COMPANIES

'88 – THE MEGASTARS!



Amiga gamers have had a year of which to be proud of. Simulations have reached to new heights in Interceptor, Menance, Xenon and Sidewinder have more than satisfied shoot 'em upers, and then those hard to catergorise Starglider II and Rocket Ranger amazed us even further.

All this could change before the year is out, so we'll just have to wait and see. Going on the demos we've seen, Thunderblade looks as if it might be the hottest arcade conversion this Christmas by far. Competition is hot though, with Operation Wolf, Afterburner and R-Type all after that number one spot, not to mention the piles of "original" games lining the shelves. Keep it here for the latest developments. . .

R-Type conversion. Cybernoid II, Salamander and Armalyte are all in with a chance of walking away with an Oskar.

Scrolling vertically we have Xenon, Sidewinder and Hybris leading the pack, whilst scrolling across the screen, Menace is giving no ground.

Adventure

Magnetic Scrolls Corruption must be a leader as is the upcoming 'Middle Earth' from Melbourne House. No doubt Andy Moss will have plenty to choose from.

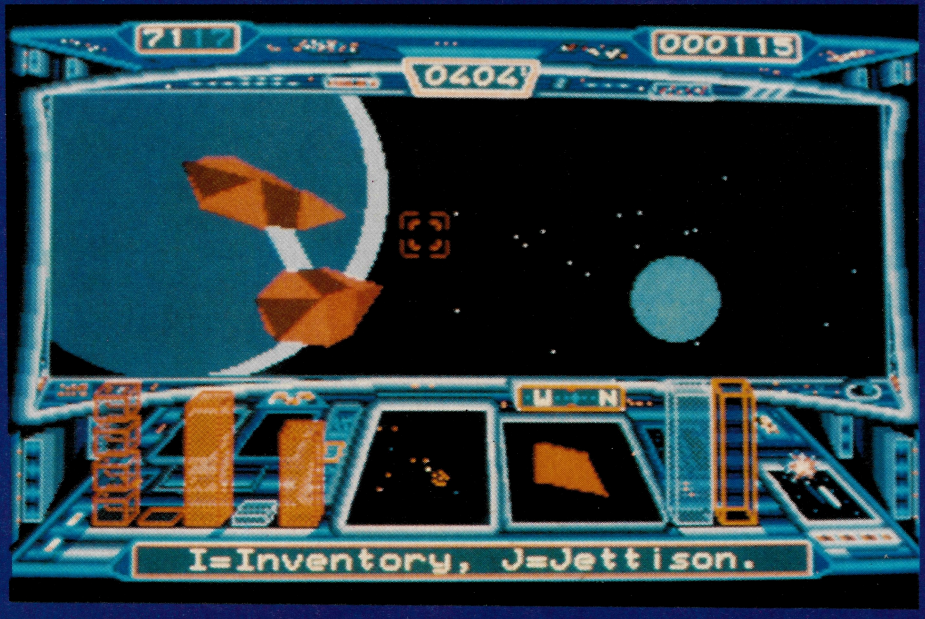
Worst Game

Gremlin as good as binned their Pink Panther licence when they had the front to release their game of the famous cartoon character. Electric Dreams gave us a Spectrum-style version of the coin-op Karnov that would have disgusted gamers in the early eighties. Perhaps even worse than these is US Gold's demented conversion of Shackled with that special "knocked up in a lunchtime" look about it.

Grandslam took a trip back in time when they released Chubby Gristle, only missing the Jet Set Willy craze by about three years! Then there were Revenge II and Quasimodo that brought Amiga gaming to all-time lows.

Best Game

Once more, Barbarian II is in the running, flanked by Platoon, Bionic Commandos and Captain Blood among others.



SPECIAL OFFER TO ALL C.C.I. READERS FROM

MEGALAND

MAGNIFICENT 7

GUARANTEE

MONEY SAVERS!! WOWZA!!!

12 MONTHS WARRANTY ON ALL PRODUCTS
DISPATCHED WITHIN 24 HOURS OF CLEARED TRANSACTION

B2000 **£839+VAT**
2090 controller and
20MB hard disk
£499+VAT
XT Bridgeboard
£399+VAT
B2000 Internal 3½ drive
£75+VAT

1581 CBM
DISK DRIVE
£115
inc VAT

MEGALAND MEGA,
MEGA PACK
Amiga A500
Photon Paint
Carrier Command
Karate Kid II
Goldrunner
GB Air Rally

Demolition
Joystick
PD Disks
Wizball
Platoon
Aegis Sonix
TV Modulator
Skyfighter
Gridstart
£449 inc VAT

MEGALAND MEGA PACK I
AMIGA A500
FREE Photon Paint
FREE Skyfighter
FREE Las Vegas
FREE Demolition
FREE Gridstart
FREE Karate Kid II
FREE Goldrunner
FREE Wizball
FREE Platoon
FREE PD Disks
FREE TV Modulator
FREE Joystick
£399 inc VAT

MEGALAND MEGA PACK 2
AMIGA A500
FREE CARRIER COMMAND
FREE Photon Paint
FREE Karate Kid II
FREE Goldrunner
FREE GB Air Rally

FREE Joystick
FREE PD Disks
FREE Wizball
FREE Platoon
Aegis Sonix
TV Modulator
£425 inc. VAT

STAR LC10
COLOUR **£249**
inc VAT

MEGASOFT
MEMBERSHIP £20 PER YEAR
INTRODUCTORY SPECIAL OFFERS

PD Disks	£8	Photon Pain	£25 inc VAT
GB Air Rally	£5	Aegis Sonix	£39 inc VAT
Leaderboard	£5	Carrier Command	£120 inc VAT
Wizball	£5	Karate Kid II	£5 inc VAT
Platoon	£6	Goldrunner	£5 inc VAT
Las Vegas	£5	Skyfighter	£5 inc VAT
TV Modulator	£15	Demolition	£5 inc VAT
Joystick	£5	Gridstart	£5

COMMODORE PC1
HIGH RES.
MONOCHROME MONITOR
ABLE ONE SOFTWARE
- Word Processor
- Spreadsheet
- Database

£325+VAT

MONITORS

1084 Hi Res Col	£199+VAT
1084 bought with CPU	£189+VAT
Philips 8833 Stereo	£219+VAT
8833 bought with CPU	£209+VAT
Mono from	£69+VAT
1084 stereo monitor	£219+VAT
1084 stereo bought with CPU	£209+VAT
1084 Hi Res Col Stereo	£219+VAT
1084 Hi Res Col Stereo if ordered with CPU	£209+VAT
1900M Mono Monitor for CBM 64/128	£85+VAT
Vision 2400 Stereo	£189+VAT

PRINTERS

LC10 CBM Version	£194+VAT
LC10 Col CBM Version	£225+VAT
Citizen 120D	£99+VAT
Star LC 10	£199+VAT
Star LC 10 Col	£239+VAT
Star LC 24-10	£299+VAT
NEC 2200	£299+VAT
Okimate 20	£119+VAT
Epson LX800	£189+VAT
Star Laser Printer	£1495+VAT
LC10 Sheet Feeder	£55+VAT
Xerox 4020	£949+VAT

C64 Olympic Pack
C64 Hollywood Pack
£129+VAT

ACCESSORIES

Monitor Cables	POA
Amiga 501 512K Ram Expansion inc	£129 VAT
Mouse Mat	£4.95 inc. VAT
Amiga Dust Cover	£4.95 inc. VAT
1084 Dust Cover	£7.95 inc. VAT
Philips 8833 Dust Cover	£7.95 inc. VAT
Printer Cables	POA
Printer Ribbons	POA
256K RAM Expansion for CBM 64	£85+VAT
128K RAM Expansion for CBM 128	£85+VAT
512K RAM Expansion for CBM 128	£129+VAT

DRIVES

2nd drive with ten double sided double density disks and free delivery. While stocks last..... **£89 incl VAT**

Cumana 3½" Cax	£79+VAT
Cumana 5¼"	£119+VAT
Amiga 2nd Drive 3½", choice of 3 types	£89 inc VAT

all with on/off & thro' port

B2000 2nd Drive	£75+VAT
A500 20OMB Hard Disk	£499+VAT
1581 3½" Disk Drive for CBM 64/128	£99+VAT
1541 2½" Disk Drive for CBM 64/128	£149+VAT

I wish to order .....
.....
My computer is .....
I enclose cheque/PO for £..... Inc VAT
or charge my Access/Visa No: Exp. Date.....
Name .....
Signature .....
Address .....
.....
Postcode ..... Tel. No .....

0703 330544
0703 332225

MORE GREAT OFFERS

OPEN NOW
RETAIL CASH & CARRY

42-44 MILLBROOK ROAD EAST
SOUTHAMPTON

FREE PRIZE DRAW
ON MEGALAND
MEGA PACKS
1ST PRIZE
HOLIDAY HOME IN THE SUN ON THE COSTA DEL SOL
2ND PRIZE
3 X AMIGA 2ND DISK DRIVES
3RD PRIZE
20 X COMMODORE WATCHES

MEGALAND

LOADSA

The best of the Compilations

Yes, it's that time of year again when all those games that have been lying around on the shelves gathering dust are bundled together and put into compilations and dumped out on the shops. It's no good if all you get is a bunch of rubbish games, even if they are cheap, so to avoid disappointment we have everso kindly provided this guide to the current batch.

Fists 'n' Throttles (Elite)

Ikari Warriors originated in the arcades as a two-player Commando variant with a couple of joysticks that rotate as well as moving in the usual eight directions. Although these couldn't be carried over to the 64, most of the game is there. The vertically scrolling desert/jungle landscapes are rather plain and the sprites are smaller than in the arcades.

Vertically scrolling kill-everyone games like these are instantly playable and Ikari Warriors is a good example. It's just a shame your mad machine gun spray has to be held back at times to avoid shooting the second player.

Buggy Boy is one of the better car racing games on the 64, partly due to its smooth 3D effect. You are behind the wheel of a dinky little buggy that races against the clock over one of five courses.

These courses are littered with fences and walls to be avoided and flags for bonus points. Logs act as ramps and can send you flying over any obstacle. Tunnels and banks are also included which are very effective. Buggy Boy is not the fastest game around but it makes up for this with very fluid gameplay, making it one of the best games on the compilation.

Enduro Racer is the worst game in the pack by far. It comes from a similar coin-op to Buggy Boy which relys mainly on its speed for thrills. Icon Design who programmed the game made a right pigs ear of the whole thing.

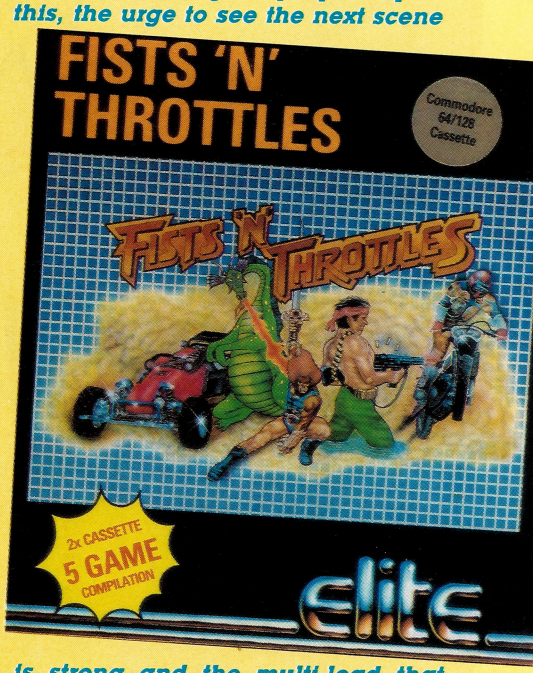
Trees at the roadside move at a pathetically slow rate and jump into the foreground in giant steps. All the traffic has been very poorly defined and the whine of the bike's engine merges with the music just in case you didn't have a headache from the graphics.

Thundercats is a fairly weak tie-in with the cartoon/toys of the same name. Lion-o runs across horizontally scrolling lands of molemen and other such monstrosities, killing them all with no more than a flick from his sword.

While the spirits are a bit blocky there's some neat parallax scrolling in the backgrounds. The tedious run, chop, run, chop gameplay is relieved by short flight sections and different weapons. Followers of the characters probably want little more than this offers, but anyone else will have played it to death before long.

Dragons Lair was possibly the most adventurous coin-op conversion ever. The original was based around a cartoon adventure set in a haunted castle, with all the graphics stored as real cartoons on a laser disk. In practice it turned out to be an expensive pastime of trial and error gameplay.

Software Projects' 64 version was a multiple sectioned game that included some large graphics and often awkward gameplay. Despite this, the urge to see the next scene



is strong and the multi-load that loads the next section while you play helps things along a great deal.

Buggy Boy and Ikari Warriors come top of the list. Dragon's Lair, Enduro Racer and Thundercats are all in the average and below bracket and as such do little for the overall value of the package. Save your pennies and shop around.

PLAYABLES!!!

Gold Silver Bronze (Epyx)

The first in the long-running Games series, Summer Games features eight olympic sporting events: pole vault, diving, 4x400 metre relay, 100 metre spring, gymnastics, freestyle relay, 100 metre relay and skeet shooting.

Its graphics look very bland in places but most of the sprite animation is convincing. Controls are basic but the multi-player format keeps the game's head above water.

Summer Games II is a big improvement over number one in every respect. Another eight events get the treatment: triple jump, rowing, kayaking, javelin, high jump, fencing, cycling and equestrian. Most of the events are very playable and the graphics are often superb.

Winter Games improves once again on the graphics of its forerunners with its spectacular scenes of snow-capped mountains. Hot dog ariels, figure and free skating, ski jump, biathlon, speed skating and bobsled are the varied events, which as always can be practiced or competed in with up to eight players.

Summer Games shows its age but the other two in the package stand up very well against today's sport sims, and with all the 23 events will keep you going for a long while, but this price is a touch over the top for a three game set.

History in the Making

A compilation of emmense proportions, History in the Making is a collection of fifteen games originally released between summer '84 and summer '87.

Leaderboard, the original game brought realistic, playable golf to computer gamers for the first time. Its combination of believable ball movement, uncluttered gameplay and multiple player, multiple course format earned it universal acclaim. It has since been surpassed by umpteen updates (Executive, World Class editions etc.) but is still the neat little game it always was.

Express Raider takes you through all your favourite western movie scenes, kicking the hell out of no-good cowboys, punch-ups atop moving trains and a bit of horsey riding thrown in to round it off.

Graphics are chunky, sound is basic and the gameplay is a weak mix of beat'em up and sh ot'em up action. It's not that bad, but was never much good in its day.

Impossible Mission combines platform leaping action with taxing but very satisfying puzzles. Your mission is to halt the appocalyptic plans of Elvin Atombender by searching out and piecing together a set of fragmented punch cards.

Graphics and sound (liste for Agent 4125's screams as he falls to his death) are superb even by '88's standards, and it's hard to believe it's one of the oldest games in the compilation. One of the few real classics that no 64 gamer should be without.

Super Cycle, from the creators of Pitstop II brought the high speed thrills of motor cycle racing (at the time of its release riding on the success of the coin-op Hang-on) to the 64.

It effectively introduces some new features to the tried and tested game style, including various weather conditions, traffic cones, bonus rounds and lane closures. A mite easy to complete, but still one of the best ever games of its kind.

Gauntlet was US Gold's Christmas biggy in '86 and although it was a stormer as far as their bank balance was concerned, it was received with some indecision by the public. The conversion was accurate and pleased addicts of the coin-op but it lost some of its shine through its bugs and unclear graphics.

No thanks to its many clones, the attraction of Gauntlet has worn thin these days. Nevertheless, newcomers should find enough monster mangling action to keep them quiet.

Beach Head II is a multi-stage action war game. Graphics are very basic but surprisingly the sound is of a much higher quality with speech and realistic effects all over the place. Everything else about the game is small and simple, including the gameplay.

Infiltrator is another amalgamation of gamestyles, this time stage one takes the form of a helicopter flight simulation. Stage two is an atmospheric stroll around the infiltrated enemy camp in which you are constantly ordered to present your forged papers to impatient guards. The final section has you frantically searching the lockers and files of the complex for vital info.

Unfortunately, the quality and detail of the initial stages is not followed up later in the game when it deteriorates into a mundane search around a maze of similar rooms.

Kung Fu Master was the forerunner to many of today's most popular karate coin-ops (Dragon Ninja, Vigilante, Double Dragon etc.) and despite its expanded sprites and ordinary sound, the satisfaction gained from kicking and punching your way through crowds of baddies makes up for its logoland characters. By no means the best beat 'em up available but an enjoyable way to let out your everyday frustrations.

Spy Hunter was converted from the coin-op that can now usually be found in dark lonely corners of dark lonely arcades. It puts you in the driving seat of an armoured Bond-style car, out to clear up the highways that are infested with gangsters. The cannon mounted on your bonnet adds some shoot 'em up flavour to the drive and dodge gameplay.

A pleasant tune plays when you dock with the weapons van but that aside all the sound and graphics are firmly set in the past. Scrolling is smooth and the car handles well but the game is just that bit too simple for most of us.

Road Runner's unique style of humour was successfully captured in this horizontally scrolling chase across the canyons and deserts of North America. You play Road Runner, constantly persued by Wile E. Coyote. A number of contraptions straight out of the cartoon are used by Wile E. in his quest for lunch.

Graphics are suitably bright and humourous, as are the soundtracks. A must for Road Runner fans.

Bruce Lee is another that shows its age in terms of sound and graphics but plays as well as the majority of recent releases. An arcade adventure spread over a large number of

THE ULTIMATE BACKUP CARTRIDGE GOES ONE BETTER...

NO A FOR

EVEN MORE POWERFUL, MORE FRIE

TOTAL BACKUP POWER

The most powerfull backup system ever devised. Unstoppable freezer system. Freeze at any point. Specially designed to work with game software. Just press the magic button to backup even the most heavily protected programs.

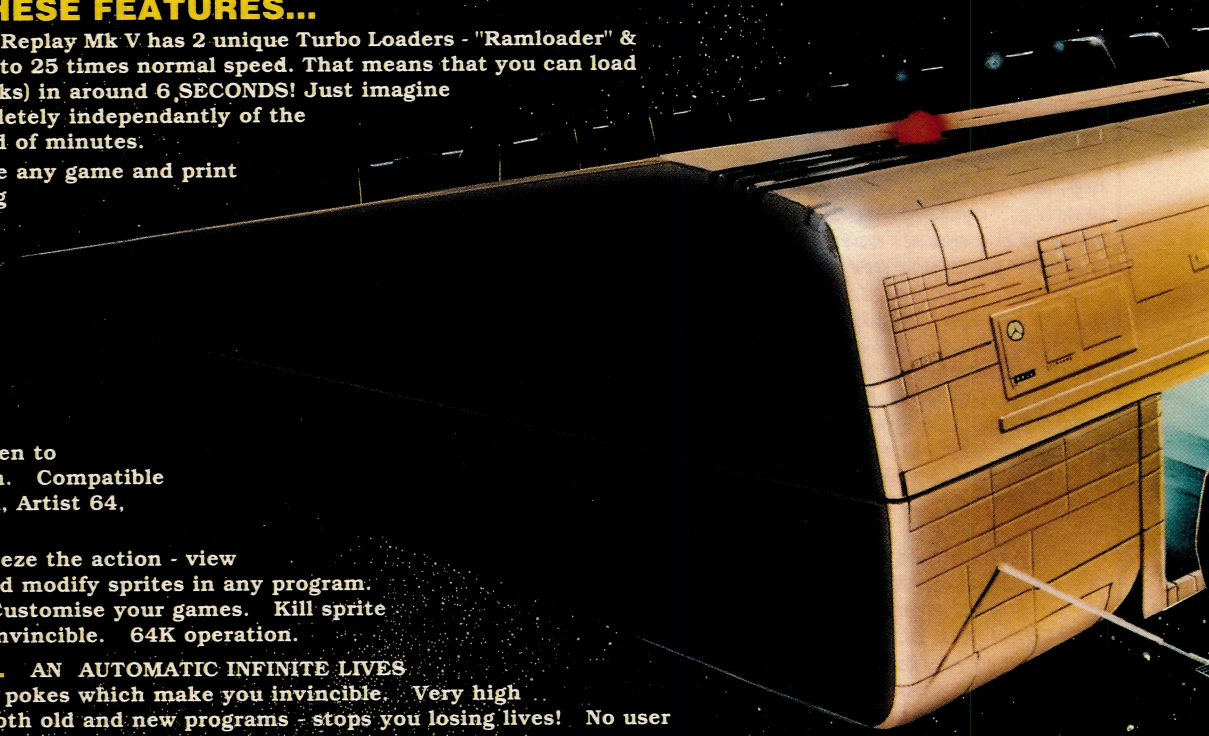
❑ TAPE TO TAPE ❑ ❑ TAPE TO DISK ❑
❑ DISK TO DISK ❑ ❑ DISK TO TAPE ❑

VERY fast & efficient program compaction. Single part save at TURBO speed to disk or tape. Backups turboload INDEPENDANTLY of the cartridge. No "programming" or user knowledge required.

THE PROCESS IS AUTOMATIC - JUST GIVE THE BACKUP A NAME.

ONLY £34.99 POST FREE

JUST LOOK AT THESE FEATURES...



TURBO RELOAD. Action Replay Mk V has 2 unique Turbo Loaders - "Ramloader" & "Warp 25". Both work at up to 25 times normal speed. That means that you can load a typical program (200 blocks) in around 6 SECONDS! Just imagine your backups loading completely independantly of the cartridge in seconds instead of minutes.

PRINTER DUMP. Freeze any game and print out the screen. Eg. loading picture, high score screen, etc. Works with most printers. MPS 801, 803, Star, Epson, etc. Double size, 16 shades, reverse print option. Very versatile - no user knowledge required.

PICTURE SAVE. Save any Hires multi colour screen to disk at the push of a button. Compatible with Blazing Paddles, Koala, Artist 64, Image System, etc.

SPRITE CONTROL. Freeze the action - view animations. Load, save and modify sprites in any program. Flip, reverse, delete etc. Customise your games. Kill sprite collisions - make yourself invincible. 64K operation.

POKEFINDER GENERAL. AN AUTOMATIC INFINITE LIVES GENERATOR! Finds those pokes which make you invincible. Very high success rate - works with both old and new programs - stops you losing lives! No user knowledge required. Great fun!

MULTISTAGE TRANSFER. Even transfers multistage programs from tape to disk. The extra parts fast load - a unique feature. Enhancement diskis required for multi-loaders (see below).

SUPER COMPACTOR. Ultra efficient program compaction techniques. Each program saved as a single file. 3 programs per disk side - 6 programs per disk, if you use both sides.

TEXT SCREEN EDITOR. Modify the text screen on a frozen program. Customise your games by adding your name to the title screen - change colours, etc., then make a backup. Also a great programmers aid.

Verify, relocated save. Fast format - 12 seconds. Built in file copy - works with long files. Built in 1541 disk copy - 1 or 2 drives. Read directory, send disk commands. Change disk name, device number. Load direct - no need type filename.

SUPERFAST DISK OPERATION. Load 200 blocks in just SIX SECONDS. Works with any program of any length. Works with multiload programs. Versatile - Backups, Basic, Monitor. Works with all drives including 1581. Use both sides of disk (1571). Standard format - no file conversion required. Superfast Save,

GRAPHICS SUPPORT UTILITIES DISK

A range of utilities to make the most of your high res pictures created with popular graphics utilities or captured with Action Replays unique picture grabber.

SLIDE SHOW. View your favourite screens in a slide show type display. Move from screen to screen - keyboard or joystick control. Very easy to use.

BLOW UP. A unique utility to allow you to take any part of your picture & 'blow it up' to full screen size. Even fills the border with powerful sprite handling techniques. Very easy to use - simple commands. An interesting utility.

SPRITE EDITOR. A complete sprite editor helps you create or edit sprites. Full colour display. Animate to view movements. Action Replay can capture/insert sprites with any program - this editor is a perfect companion.

MESSAGE MAKER. Takes your favourite screen - created with a graphics package or captured with Action Replay & turns it into a scrolling screen message complete with music. Send screens to your friends with music & text scrolling. Simple text editor - easy to use. Choice of music. An exiting utility. Finished screens stand alone. ONLY £12.99

WHAT THE REVIEWERS SAID

"I'm stunned, amazed and totally impressed. This is easily the best value for money cartridge. *The Cartridge King!"*
Commodore Disk User

ACTION REPLAY ENHANCEMENT DISK

The biggest and best collection of special parameters and file copy programs for transferring non-standard multi-load tapes to disk - games like LAST NINJA, CALIFORNIA GAMES, LEADERBOARD, DRAGON'S LAIR - NINETY titles in all. Almost all major titles covered. Latest edition includes SALAMANDER, HAWKEYE, THE GAMES series, STREETFIGHTER, VINDICATOR, ALIEN SYNDROME, PLATOON and many more. Just about every major multiload title can be transferred fully to disk. Cheats for infinite time, lives etc. The GRAPHIC SLIDESHOW - latest edition displays multicolour pictures or loading screens saved by Action Replay or any major Art Package - Blazing Paddles, Koala, Advanced Art Studio, Artist 64 etc. Lots of fun. Only £8.50. Upgrades - send £3.50 plus old disk.

W CTION REPLAY Mk V

CBM64/128 PROFESSIONAL HAS ARRIVED

NDLY & NOW EVEN MORE FEATURES!

ALL FEATURES AVAILABLE TO TAPE OR DISK USERS.

ACTION REPLAY MK V differs from all other cartridges because it combines an 8K RAM with a FULL 32K operating system ROM. That means that ALL features are INSTANTLY AVAILABLE AT ALL TIMES.

WARNING!! Other systems use outdated technology which severly limits performance. Action Replay's state of the art hardware gives you MORE POWER, MORE SPEED, MORE FACILITIES than any other cartridge. There really is no comparison. Here are just some of the features...

- **MORE TAPE FACILITIES.** Dual speed tape turbo for backups. Very fast, very reliable. Programmers tape turbo - very compatible. Even works with sequential files. Built in slideshow for hires pictures. You don't need a disk drive to use Action Replay.
- **TOOLKIT COMMANDS.** Auto line numbering. Defined function keys. Old, Delete, Merge, Append, Linesave. Plist - list directory direct to printer. Single stroke load, save, directory. Switchable disk/tape turbo.
- **FULLY INTEGRATED OPERATION.** The MK V 'Professional' has an onboard custom LSI LOGIC PROCESSING CHIP that integrates the whole range of utilities and makes them available at the press of a button at any time.
- **CENTRONICS INTERFACE.** For parallel printers, eg Epson, Star, prints listings with graphic characters. Send escape codes - make full use of your printer's extra facilities. Auto detect of parallel printer - no special commands required.
- **PROFESSIONAL MACHINE CODE MONITOR.** Full 64k monitor available at all times. Examine all memory, registers, IO, stack of any frozen program. Full range of commands, plus the luxuries that only a high capacity RAM/ROM system can offer: Assemble, disassemble, Hex/Ascii. Interpret in Ascii or screen codes. Fill, Hunt, Compare, Transfer memory. Number conversion, Register, Go. Load, Save, Verify (turbo, tape or disk). Two way scrolling of all screen displays. Output to printer (CBM or Centronics). Directory, error channel, 2 drive operation. Disk Monitor - read block, write block, assemble/disassemble drive memory etc. Hex calculator - add, subtract, multiply, divide. Unique set break/set freeze system. JSR Freeze. Full "floating" operation - corrupts no memory. Call Monitor from Basic or Freezer. Call Freezer from any point in your program.

AR Mk V
Reloads an average BACK-UP in **6 Seconds!!**

UPGRADE INFORMATION

MK IV Professional to Mk V Professional - just send £9.99 & we will send you a new Mk V Operating System Chip. No need to send your old cartridge - just plug in the new chip!
Mk IV (Standard) to Mk V Professional - send your old cartridge plus £15.99 & we will upgrade it to Mk V Professional . (allow 14 days).

PERFORMANCE PROMISE

Action Replay will backup any program that any other cartridge can backup - and more! It also has an unmatched range of onboard features. Before you buy, check our competitors ads to see what they offer and see how many of the Action Replay MK V features are either not there or have to be loaded from seperate disks etc. When you buy Action Replay, if you don't find our claims to be true, then return it within 14 days for a full refund.

ALL ORDERS NORMALLY DESPATCHED WITHIN 48 HRS

HOW TO ORDER ...

BY PHONE	BY POST	FAX
0782 744707 24hr Credit Card Line	Send cheques/POs made payable to "Datel Electronics"	0782 744292 UK ORDERS POST FREE EUROPE ADD £1 OVERSEAS ADD £3

PRICES AND SPECIFICATIONS CORRECT AT TIME OF PRESS AND SUBJECT TO CHANGE WITHOUT NOTICE

CALLERS WELCOME - Please reserve goods by telephone prior to visit.

DATEL ELECTRONICS

DATEL ELECTRONICS LTD., FENTON INDUSTRIAL ESTATE GOVAN ROAD, FENTON, STOKE-ON-TRENT, ENGLAND.

SALES ONLY	TECHNICAL ONLY
0782 744707	0782 744324

varied screens, the game gives you the chance to play Bruce, while the fat green Yamo (a stupid but strong sumo wrestler) can be controlled either by a second player or the computer.

Ignore the small blocky graphics and you have a great little game that will make a nice change from the standard one-on-one karate simulations.

Goonies is an unfortunate game that has its origins in the kids' adventure film of the same name. Dreadful colour schemes and spirits do very little for what could have been a fun little game. The worst of the lot.

World Games is another of those great games that never seems to die. It takes the players around the world, stopping off at various locations to participate in the local sport. There's log rolling in Canada, Caber Tossing in Scotland, sumo wrestling in Japan and cliff diving in Mexico to name a few!

All of the graphics are amazing, just take a look at the puffing, bloated sumo wrestler as he lies exhausted on the deck after a bout! Play it today and you'll still be playing it this time next year, and most likely the year after that. Nothing short of superb.

Raid (Over Moscow) is a great game very much in the style of Beach Head I and II. Seven sections see you on a mission to avert a nuclear attack from Russia. Most of the game is based on a number of shoot 'em up themes that give the whole thing a great deal of variety. Again, a lot of the graphics are unimpressive but the game shines through.

Beach Head sets you the task of invading an enemy base set on a remote island. Another multi-stage wargame casts you as captain of a naval fleet which must break through the initial seabourne defences. Landing on the beaches, tanks trundle off on their way to the base where a final shoot out decides the victor. Not quite up to the standards of Raid, but enjoyable all the same.

Thirty quid is not cheap, but then this is no ordinary compilation, though seasoned 64 games will most likely have the majority of these already. Games like Leaderboard, World Games and Impossible Mission make the package a great long term investment. Together with the rest, History in the Making would make an ideal buy for anyone new to the 64.

10 Great Games III

Ten great games, or ten not so great games?

Last Mission is a disgusting multi-directionally scrolling shoot 'em up with some of the blockiest, most tasteless graphics ever seen. Not only that, the scrolling has a jerky glitch that crops up all too often. Forget it.

Iridis Alpha: a typically wierd game from Mr Wierd himself, Jeff Minter. A gilby fighter is your transport in this horizontally scrolling blaster with a difference (or two). There's too much in it to describe it properly here, but if you want something a bit out of the ordinary, this is your game.

Alleykat scrolls vertically and is not that different from your standard scrolly shooter, but for those extra details that have become the trademark of author Andrew Braybrook. To make a change from saving mankind, Alleykat puts you in a race where foul play is fair play.

For all its peripheral screens of options, the actual game is a bit disappointing. Fans of Braybrook's other games should be interested but don't expect too much.

Leaderboard (see History in the Making)

10th Frame can be thought of as the ten pin bowling version of Leaderboard. It has a very similar control method and an equally well animated character sprite. The pin fall is extremely realistic but the game is too limited. Being confined to a single bowling alley was unavoidable, but without the great feeling of freedom generated by Leaderboard's landscapes its appeal tends to wear off before long, though I can't see anyone beating this for realism.

Ranarama was a good attempt at a more strategic variation on the Gauntlet theme. It concentrates a lot more on magical and scorcery rather than demanding you slay crowds of monsters as in the coin-op. Leaning more the role playing side of things, Ranarama will find favour with anyone who wants a bit more depth from their Gauntlet clone.

Fighter Pilot is as its name suggests, a flight simulator. Flight sims have come a long way since this hit the charts. Most of the game is played looking at a tilting horizon where the featureless ground meets the sky. Hardly state of the art.

Firelord is a multi-screen arcade adventure very much in the style of Ultimate's early Spectrum games (gameplay from Sabre Wulf, graphics from Knight Lore). The wooded screens make up a maze through which you scurry on your way to becoming Master of Camelot. Trading screens add some strategy but the gameplay is old hat.

Eagles has a horizontally split screen to show independant scrolling views for each player. Sophisticated jet fighter planes are under the players' control in what is no more than a two player defender variant, and a puny one at that. Originally released by Hewson but not up to their usual high standard.

Rebounder rounds off the compilation. The sequel to the very original and entertaining Bounder still has you controlling that tennis ball bouncing on platforms high in the sky, but now has developed four way scrolling, extra weapons and junctions. Almost as much fun as the first game, Rebounder is a novel variation on the platform theme.

Instead of "Ten Great Games III", maybe it should have been titled "Three Great Games X"; the only games that could really be called great are Rebounder, 10th Frame and Leaderboard. The rest range from naff to average. In all, not much cop really.

T.H.

TURTLESOFT

Merry Xmas from the Turtle to all our customers old & new Don't forget to ring him for all your Xmas Goodies

TURTLESOFT AMIGA XMAS PACK AMIGA A500

Free TV Modulator Free Paint Prog
Free Software Your Choice £75 RRP
Or Software £100 PRP & No Modulator
Plus W'bench/Basic/Tutorial/Manuals
£419.95 INC VAT FREE DELIVERY!!

TURTLESOFT XMAS PRINTERS

Citizen 120D NLQ	£149.95
Panasonic KXP-1081 NLQ	£179.95
MP165 ++ NLQ 165 CPS	£199.95
Star LC-10	£219.95
Star LC-10 Colour	£259.95
Sekosha SP-180AI	£169.95
Sekosha SP-1200AI	£189.95
Sekosha SL-80AI 24 Pin	£339.95

TURTLESOFT AMIGA XMAS MONITORS

New A1084S Col Mon	£249.95
Phillips CM8832 Col Mon	£219.95
Phillips CM8833 Col Mon	£259.95
Phillips CM8852 Col Mon	£279.95

TURTLESOFT XMAS DISC DRIVES

Cumana CAX354 880k 3.5" Drive
Now with On-Off Switch
£99.95 INC VAT FREE DELIVERY!!

TURTLESOFT XMAS 3.5" DISC BONANZA

10 DSDD + Library Case	£12.95
10 DS DD Quality Branded	£18.95
20 DSDD + Lockable Disc Box	£22.95
40 DSDD + Lockable Disc Box	£39.95
50 DSDD + Lockable Disc Box	£47.95
80 DSDD + Lockable Disc Box	£69.95

MOUSE MATS, SPECIAL PRICE £4.95

Disk Cleaning Kits only £4.95
Amiga Dust Covers from £8.95
Lockable Storage Box (hold 40 3.5" disks) £6.95
Mouse Brackets £2.95
Amiga Joystick Extension (pair) £6.95

CANON PRINTERS XMAS BARGAINS

CANON PW1080A 190CPS NLQ 80 COLUMN PRINTER
SAVE OVER £200. OUR PRICE ONLY £129.95
CANON A55 190CPS NLQ 15" CARIAGE PRINTER
SAVE OVER £200 OUR PRICE ONLY £199.95
LIMITED STOCKS AT THESE VERY SPECIAL PRICES

AMIGA GAMES SOFTWARE	Retail Price	Our Price
Aargh!	19.95	£13.95
Advanced Dungeons & Dragons	£24.95	£19.95
Adventure Construction Set	£14.95	£10.49
Alien Syndrome	£24.95	£16.95
Archon Collection	£19.95	£13.95
Armagaddon Man	£19.95	£13.95
Army Moves	£24.95	£16.95
B.A.T.	£24.95	£16.95
Bad Cat	£24.95	£19.95
Barbarian (by Palace)	£19.95	£13.95
Bards Tale II	£24.95	£16.95
Battlechess	£24.95	£16.95
Bermuda Project	£24.95	£16.95
Better Dead Than Alien	£19.99	£13.95
Beyond The Ice Palace	£24.95	£16.95
Beyond Zork	£24.95	£16.95
Bionic Commando	£24.95	£19.95
BMX Simulator	£14.95	£10.49
Bombjack	£24.95	£16.95
Bubble Ghost	£19.95	£13.95
Buggy Boy	£24.95	£16.95
Capone	£29.95	£20.95
Captain Blood	£24.95	£16.95
Carrier Command	£24.95	£16.95
Chessmaster 2000	£24.95	£16.95
Chubby Gristle	£19.95	£13.95
Corruption	£24.95	£16.95
Crash Garrett	£24.95	£16.95
Crazy Cars	£24.95	£16.95
Dark Castle	£24.95	£16.95
Earl Weavers Baseball	£24.95	£16.95
Ebonstar	£24.95	£18.95
ECO	£24.95	£16.95
Elf	£19.95	£13.95
Emerald Mine	£14.95	£10.49
Empire	£24.95	£16.95
Empire Strikes Back	£19.95	£13.95
Enlightenment	£19.95	£13.95
Face Off	£14.95	£10.49
Ferrari Formula One	£24.95	£16.95
Final Command	£24.95	£16.95
Fire & Forget	£24.95	£18.95

AMIGA GAMES SOFTWARE	Retail Price	Our Price
Flight Simulator II	£39.95	£27.95
Football Manager 2	£19.95	£13.95
Formula One Grand Prix	£19.95	£13.95
Fortress Underground	£14.95	£10.49
Fusion	£19.95	£13.95
Game Over II	£24.95	£16.95
Garrison II	£24.95	£16.95
GFL American Football	£24.95	£16.95
Guild of Thieves	£24.95	£16.95
Highway Hawks	£19.95	£13.95
Ikari Warrior	£24.95	£16.95
Interceptor	£24.95	£16.95
Iridon	£19.95	£13.95
Iron Lord	£24.95	£16.95
Jet (SC/Disc Compatible)	£39.95	£27.95
Jinx	£19.95	£15.95
Kings Quest III	£24.95	£16.95
Leaderboard Collection Birdie	£24.95	£19.95
Legend of the Sword	£24.95	£16.95
Leisure Sun Larry	£19.95	£13.95
Major Motion	£19.95	£13.95
Maniax	£19.95	£13.95
Marble Madness	£14.95	£10.49
Mike the Magic Dragon	£19.95	£13.95
Mind Fighter	£24.95	£16.95
Mortville Manor	£19.95	£13.95
Nigel Mansell Grand Prix	£19.95	£13.95
Obliterator	£24.95	£16.95
P.O.W.	£29.95	£20.95
Pandora	£19.95	£13.95
Peter Beardsley	£19.95	£13.95
Phantom 2	£14.95	£10.49
Phardasle	£24.99	£16.95
Phantasm	£19.95	£13.95
Pink Panther	£19.95	£13.95
Platoon	£24.95	£16.95
Port of Call	£30.95	£27.95
Power Drome	£24.95	£16.95
Pully's Saga	£24.95	£16.95
Quadralian	£19.95	£13.95
Quantox	£14.95	£10.49
Reach for the Stars	£24.95	£16.95

AMIGA GAMES SOFTWARE	Retail Price	Our Price
Roadblaster	Phone	Phone
Robbeary	£19.95	£13.95
Rocket Ranger	£29.95	£20.95
Rockford	£19.95	£13.95
Rolling Thunder	£24.95	£19.95
Romantic Encounters	£24.95	£16.95
Sacrophaser	£14.95	£10.49
Sargon III	£19.95	£13.95
Scenery Disc 11	£24.95	£16.95
Scenery Disc 7	£24.95	£16.95
Scenery Disc Japan	£19.95	£13.95
Scenery disc W/European	£19.95	£13.95
Scrabble Deluxe	£19.95	£13.95
Shadow Gate	£24.95	£16.95
Shanghai	£24.95	£16.95
Skate or Die	£24.95	£16.95
Skatebail	£24.95	£16.95
Sky Chase	£19.95	£13.95
Skyfox 2	£24.95	£16.95
Soccer Supremo	£14.95	£10.49
Star Fleet 1	£24.95	£16.95
Star Glider II	£24.95	£16.95
Star Goose	£19.95	£13.95
Stir Crazy	£19.95	£13.95
Street Fighter	£24.95	£19.95
Strip Poker 2 Plus	£14.95	£10.49
Strip Poker Plus 2 Data Disc 1	£9.99	£6.99
Summer Olympiad	£19.95	£13.95
The Hunt for Red October	£24.95	£16.95
Three Stooges	£29.95	£20.95
Thundercats	£24.95	£16.95
Time & Magik	£19.95	£13.95
Ultima IV	£24.95	£16.95
Vampires Empire	£19.95	£13.95
Virus	£19.95	£13.95
Vixen	£19.95	£13.95
Whirligig	£19.95	£13.95
Wizards Crown	£29.95	£20.95
World Darts	£14.95	£10.49
World Tour Golf	£24.95	£16.95
Xenon	£19.95	£13.95
Zany Golf	£24.95	£16.95
Zoom	£19.95	£13.95

AMIGA SOFTWARE BUSINESS UTILITY GRAPHIC	Retail Price	Our Price
Adrum	£39.95	£29.95
Aegis Animator/Images	£103.50	£83.95
Aegis Audio Master	£48.00	£36.95
Aegid Diga (Comms S/Ware)	£59.95	£46.95
Aegis Draw-Plus	£186.95	£156.95
Aegis Impact	£83.25	£51.95
Aegis VideoScape 3-D	£143.75	£116.99
Climate	£39.95	£31.95
Delux Arts Part 1 Data Disc	£9.99	£6.99
Delux Arts Part 2 Data Disc	£9.99	£6.99
Delux Hot & Cool Jazz D/Disc	£9.99	£6.99
Delux Music Construction	£89.95	£49.95
Delux Paint II	£89.95	£49.95
Delux Paint	£24.95	£16.95
Delux Print II	£49.95	£35.95
Delux Video	£69.95	£49.95
Delux Photo Lab	£69.96	£49.95

AMIGA SOFTWARE BUSINESS UTILITY GRAPHIC	Retail Price	Our Price
Devpack Assembler	£59.95	£41.95
DigiPaint	£59.95	£41.95
DOS to DOS — Atari/Amiga Data/ Text Trans	£39.95	£31.95
Instant Music	£24.95	£16.95
K-Seka 68000 Assembler	£49.95	£36.95
Lattice C Ver. 4 MCC	£189.95	£134.95
Logistic V1.2 SPDBUGR (1MB)	£114.95	£89.95
MCC Macro Assembler	£69.95	£55.95
MCC Pascal	£89.95	£64.95
MCC Shell	£49.95	£39.95
Micro Base	£19.95	£13.95
Micro Text	£19.95	£13.95
Modula 2 (Standard)	£99.95	£77.95
Modula 2 (Development)	£149.95	£116.99
Music Studio	£34.99	£23.95
Page Setter	£79.95	£64.95

AMIGA SOFTWARE BUSINESS UTILITY GRAPHIC	Retail Price	Our Price
Photon Paint	£69.96	£49.95
Pro Sound Designer (S/W & H/W)	£79.95	£62.99
Pro Sound Designer (S/W Only)	£34.95	£27.95
Publishing Plus DTP	£99.95	£82.95
Publishing Partner Pro'nal	£149.95	£116.99
Scribble II	£99.95	£49.95
Superbase Personal	£59.95	£45.95
Superbase Professional	£249.95	£169.95
Transformer	£49.95	£29.95
TV Show	£69.95	£56.95
TV Text	£69.95	£56.95
VIP Professional	£99.95	£77.95
Vizawrite Desidop	£99.95	£77.95
Word Perfect V4.1	£228.95	£179.95
Works (The) WP/SP/DB	£149.95	£69.95
Write & File (WP/DB needs 1MB)	£99.95	£77.95
Zuma Fonts Vol 1 2 & 3 (each)	£39.95	£33.95

AMIGA SOFTWARE SPECIALS AMIGA SOFTWARE SPECIALS AMIGA SOFTWARE SPECIALS

Please ring for Availability on the Titles Below as Stocks are Strictly Limited

Alien Strike £6.99	Goldrunner £6.99	Roadwar Europa £13.95
Amegas £6.99	Gridiron £9.99	Rocky £6.99
Arcade Clasics (Robisk) £9.99	Instant Flight £9.99	Seconds Out £6.99
Arcade Clasics (Anco) £9.99	Jump Jet £6.99	Sentinel £9.99
Arctic Fox £9.99	Leaderboard (Not A500) £9.99	Sinbad & Throne of Falcon £13.95
Arena/Brattacus Pack £9.99	Leviathan £6.99	Sky Fox £6.99
Cruncher £6.99	Mission Elevator £9.99	Spaceport £6.99
Cutthroats (Infocam) £9.99	Moebius £6.99	Star Glider £9.99
Demolition £4.99	Phalanx £4.99	Starway £9.99
Diablo £6.99	Power Struggle £6.99	Stationfall (Infocom) £9.99
Feud £4.99	Q Ball £6.99	Terrorpads £9.99
Frost Byte £9.99	Roadwar 2000 £9.99	Test Drive £9.99
		Vaders £4.99

Software & Small items sent 1st Class Post. Cheques require 7 days for clearance. Please make cheques payable to Oaktree Consolidated Ltd

Hardware items sent by overnight courier — Now free of charge. Please ring for availability of new software items

Access

Ring us for super Atari ST Deals. Hardware & Software. Just because you don't see it — Doesn't mean we haven't got it — Call for Details

VISA

Post: Send Cheques/PO or Visa/Access details to the address below. Phone: Call (0476) 591040. 24 Hour Service with your Visa/Access details

Turtlesoft Dept CC12, Unit 3, The Old Malthouse, Springfield Road, Grantham, Lincs NG31 7SE

Subject to availability, all items are despatched within 24 HRS E&OE

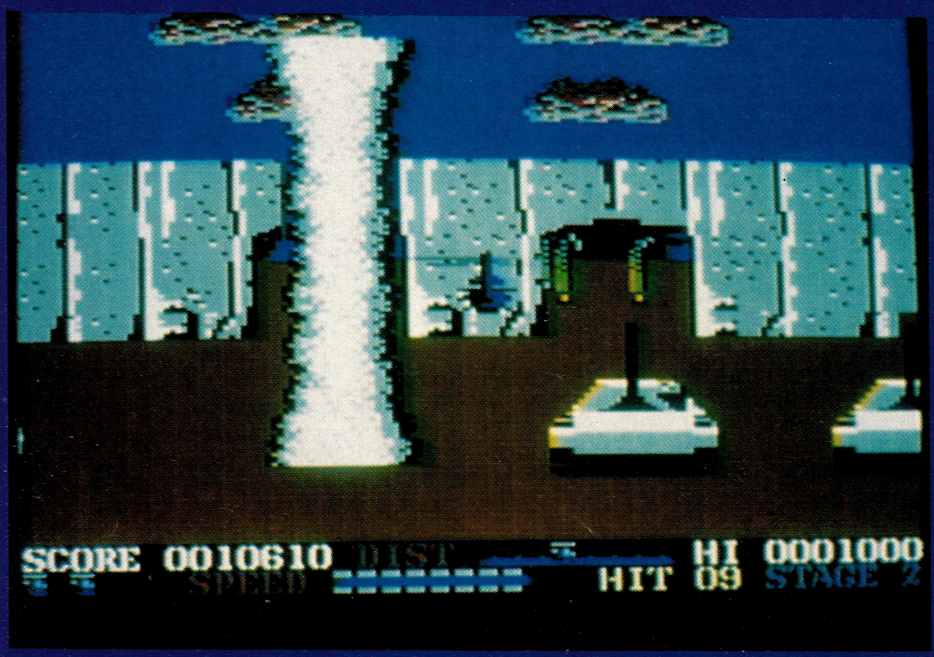
THUNDE

As the hardware used by the latest arcade hits constantly improves, the job of a the man who tries to replicate them on 8-bit machines gets progressively more difficult. Experienced in the art of arcade to home conversion, Chris Butler is that very man and in the case of Thunderblade he has coped surprisingly well with the tough task.

It's that favourite "one man against the entire enemy army" scenario again, this time you are at the controls of a heavily armed helicopter fighting both airborne and landbased assault vehicles. There are four levels in the game (loaded separately) and these are each divided in three sections.

Level one begins with your chopper buzzing over and through a city of tower blocks, viewed from above your aircraft. These scroll down the screen in 3D, giving a more realistic feeling of height than a standard 2D scroll. Your altitude is controllable, though the sensation of diving and climbing is not all it could have been. Tanks trundle along the road below, teaming up with jeeps and helicopters to try to blow you out of the sky.

Soon you reach the end of the first stage and the view-point changes to one close behind the chopper. More tower blocks stand in your way and pose a greater threat than before as you now lose your ability to fly over the top of them. Again tanks and enemy choppers shoot fireballs in your direction but nothing your machine guns and missiles can't sort out. At top speed the 3D is very fast but a bit wobbly in places. There are sufficient frames in all the objects' animation for the effect to work well, even if the tower blocks look like licorice allsorts.



Next comes a comparatively standard implementation of an attack over a giant battleship. Like the first stage it scrolls down the screen but has done away with the 3D perspective. To make up for this there are loads of gun installations to blow up with your rockets, making for a very satisfying, if not particularly original shoot 'em up in the traditional style. Reach the end alive and you find yourself transported to the beginning of level two.

The rocky cliff walls are pretty blocky but then again, what are rocks if they are not blocky? Moving swiftly along (as you tend to do in this game) we arrive at stage two. The caverns of the arcade original have been compromised a little with the omission of a ceiling, but the towering columns and gateways interspersed with conifers hurtle out of the screen at a fair whack.

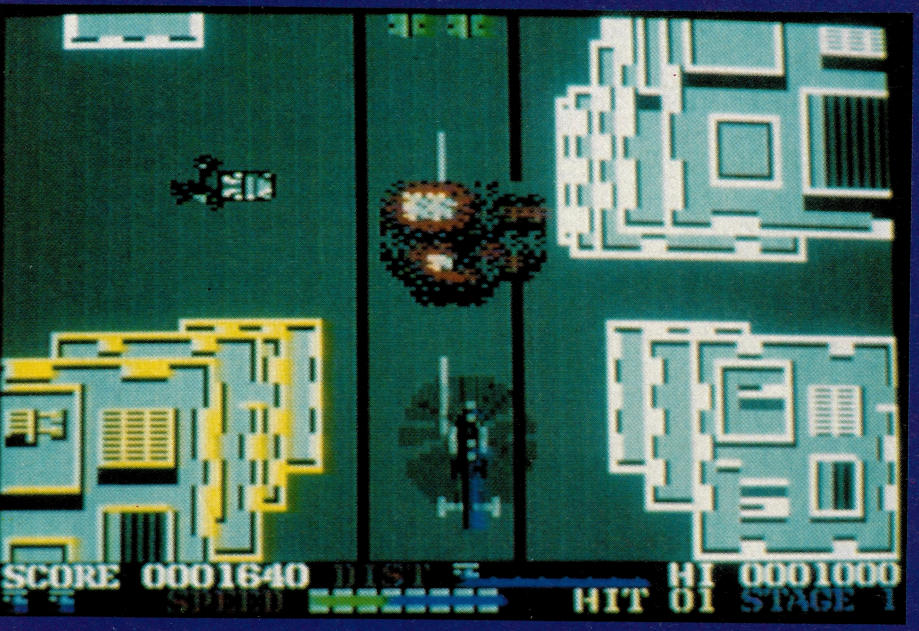
Survive that and a huge armoured vehicle descends the screen in a similar fashion to the battleship.

Stages one and two of the next level have a strong sea-faring flavour (you know, sort of fishy with salty overtones). The tangled bushes sprouting from the blue depths are so big in places they obscure the enemy gunboats, so there's no time to hang around admiring the scenery.

"Tanks and enemy choppers shoot fireballs in your direction but nothing your machine guns and missiles can't sort out."

RBLADE

US Gold



At the start of the game you get the choice of playing to a suitably helicopterish backing track or some standard woosh-bang sound effects.

Despite their slightly untidy look, the graphics are often impressive emulations of the originals. Then again, some sections of the game are really no more than the hundreds of vertically scrolling shoot 'em ups we have seen over the last year or two. It's the 3D sections seen from behind the chopper that form the backbone of Thunderblade on the 64. The other sections often serve only as mildy entertaining intermissions. Still, the good bits are very good and coin-up Thunderbladers should not be disappointed, and with its variety of phases will keep you at it longer than most coin-op conversions this Christmas.

Incidentally, U.S. Gold who believe Thunderblade will 'outrun' Outrun, last year's Number One in the charts (and for that matter Operation Wolf and Afterburner too) are to be praised for lowering the price of the disk version to £11.95, making Thunderblade probably the best disk value around.

T.H.

Graphics: 80%
Sound: 74%
Playability 85%
Overall: 80%
Rating: MEGA
Price: £9.95 (cass)
£11.95 (disk)

An Amiga version should be finished by the time you read this. The game we saw looked very close to the original but for a slight lack of speed. Smoother perspectives give excellent sensations of flight and vertigo. Let's hope they can speed it up a little in time for the release.

Adventure

BY ANDY MOSS

"Our interactive fiction stood out for its richness and depth in comparison to others. Today, with the graphic and memory power of our computers we feel that we really can add an exciting visual dimension to our stories without sacrificing any of the qualities that our customer's love."

'ADVENTURE, USA STYLE' IS THE SUBJECT FOR THIS MONTHS ADVENTURE COLUMN, ANDY MOSS GOES TRANSATLANTIC IN SEARCH OF INFOCOM, AMONGST OTHERS.

In an effort to bring you only the very best coverage here at CCI, (would we offer anything else to the brightest readers around?) your hero writes to you this month from the United States, where I have been in hot pursuit of some legendary names in the adventuring world. My first port of call was Cambridge, up near Boston which is the hallowed home of Infocom, after that it was over to the west coast and a visit to Electronic Arts near San Francisco and then on to Los Angeles to pop in on big Bob at Cinemaware. After seeing some of the development work that is taking place at these companies right now, it is apparent that next year is really going to be something to look forward to, for adventure fans with some clever innovative new products on the drawing board.

Having the chance to visit Infocom on their home territory was something that I had been yearning to do since I finally finished Zork III, and I confess that driving towards their hallowed office I felt a heightening excitement that increased right up until I turned into the parking lot that was beside their building.

The Infocom HQ is as much unlike an adventure environment as you can get. Smooth, ultra-modern doors whisk open automatically to envelop you upon entering into a formal modern business reception area. I kept thinking that any minute an elf or at least the odd wizard might just be waiting for me around the corner, but sadly no, just more office suites with more hardware and more copious files.

As I entered the reception area, I almost bumped into Dave Lebling, co-author of ZORK and co-founder of the company. We had met before, if you recall, at the Mediagenic Press bash and with not so much as a 'Christ I know him, but I can't remember where from!' memory lapse, he straight off said "Hi Andy, good to see you again." I was humbled. The great Lebling remembered me! I was ushered in to meet the rest of the gang by the beautiful and charming Eileen Milauskas who, if she worked in my office, would certainly stop me from concentrating on anything to do with computers for ever...

continued on page 98

LAN COMPUTER SYSTEMS

SHOW ROOM OPEN MON TO SAT 10.30am to 5.30pm

ONE OF EUROPES LARGEST AMIGA CENTRES
WE ONLY SELL GENUINE U.K. SPEC AMIGA

LAN AMIGA SOFTWARE PACK
AMIGA 500

Free 20 programmes condensed onto 2 disks for your convenience.
FREE MOUSE MAT *FREE* DUST COVER *FREE* JOYSTICK
£100 OF SOFTWARE WITH YOUR AMIGA
YES YOU CHOOSE THE SOFTWARE YOU WANT WITH YOUR AMIGA (£100 RRP) IF YOU WISH TO ORDER A TV MODULATOR THEN YOU WILL HAVE **£75.00** TO SPEND ON SOFTWARE

£419 INC. VAT

LAN CHRISTMAS PACK
SAVE £180 OFF RRP

A500 computer
Mouse controller
Dust cover
Mouse mat
Joystick
T.V. modulator
10 blank disks
Disk storage box
Ports of call
3 Stooges
Barbarian
Terrorpods
Wizz Ball
ECO
Obliterator

ALL THIS FOR £499.00 inc. VAT

Available only while stocks last.

★ MONITORS ★

1084 S Stereo High Res Col	£199.00+VAT
if purchased with computer	£189.00+VAT
Philips 8833 monitor	£219.00+VAT
if purchased with computer	£209.00+VAT
High resolution monochrome monitors from	£69.00+VAT

★ ACCESSORIES ★

A501 RAM expansion	£129.00 inc. VAT
Mouse mat	£4.95 inc VAT
Amiga dust cover	£4.95 inc VAT
Philips/1084 dust cover	£4.95 inc. VAT
3½" disk drive cleaning kit	£7.95 inc VAT
TV modulator	£24.15 inc VAT
10 D/S 3.5 disks	£14.95 inc VAT
20 D/S 3.5 disks in 80 capacity lockable box	£29.95 inc VAT

★ DRIVES ★

Cumana CAX354 with on/off switch	£99.95 inc VAT
Supra 20mb hard disk	£400.00 inc VAT

★ PRINTERS ★

Citizen 120D	£99.00+VAT
Panasonic KXP 1081	£145.00+VAT
Star LC 10 Printer	£189.00+VAT
Star LC10 Colour printer	£233.00+VAT
Nec P2200 24 Pin Printer	£279.00 + VAT
Epson LX 800	£179.00+VAT
256K Printer Buffer	£160.00+VAT
Printer Cable	£13.00+VAT
Box of Paper 2000 Sheets	£13.00+VAT
Printer Stand	£9.95+VAT
Printer Stand	£26.00+VAT
Printer Ribbons from	£3.00+VAT
New Star LC24-10	£299.00+VAT
Nec Multisink II	£469.00 + VAT

★ SPECIAL OFFER ★

STAR LC10 COLOUR
IN STOCK
STAR LC10 COLOUR PRINTER £233+VAT

OKIMATE 20 COLOUR PRINTER
£139.00 inc. VAT

★ AMIGA B2000 ★

Internal Genlock	Phone
8Mb RAM Board Polulated to 2Mb	Phone
B2000	£849.00
2MB RAM BOARD	£399.00
XT Bridge Board	£399.00
20 MB hard disk	£399.00

A501 RAM EXPANSION NOW IN STOCK

APPLICATIONS SOFTWARE

The Works All For £69.00 inc. VAT

A Wordprocessor + Database and Spreadsheet

The Works is A Three in One Pack

Scribble 2 is the Word Processor
Analyse 2 is the Spreadsheet
Organise is the Database

LANSOFT CLUB

The Club for St and Amiga users everywhere all prices include VAT

★ Special Introductory Prices ★
★ Membership — £20 — (per year) ★
★ Save up to 80% off Games Software ★
★ Up to 30% — Off Application Software ★

Special Club Prices on Cumana Disk Drive
£89.00 inc VAT

01 597 8851
1063 HIGH RD,
CHADWELL HEATH,
ROMFORD, ESSEX, RM6 4AU

HOW TO ORDER

Enclose letter with cheque, postal order or credit card number for amount including VAT and delivery charge. Credit card holders may order by telephone. Contact sales desk. Dispatch normally in 24 hours.

Prices current at time of going to press. Subject to availability.

All prices exclusive of VAT + delivery unless otherwise stated

Official Orders from Educational Establishments, Local Authorities and Government departments welcome. Contact Education Department.
FAX: 01-590 6057. Telex: 995548.
Telex: 995548.

TV TUNER

Turn your monitor into a TV. 12 Programmes selection complete with all cables + aerial switchable between TV + computer.

ONLY £55.00 + VAT
if ordered with monitor
£50.00 + VAT

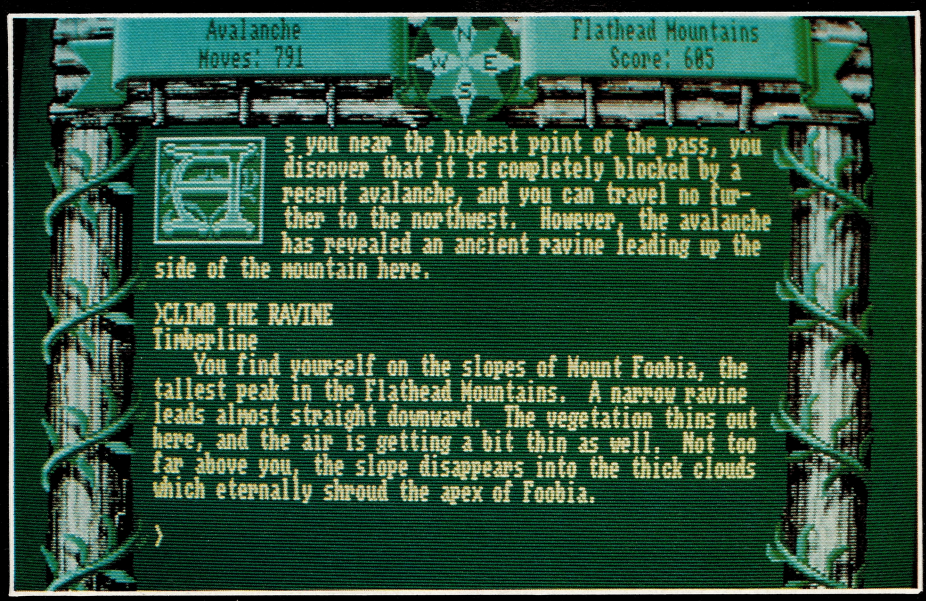
continued from page 96

The first office we went into was manned by one Jeff O'Neil who is responsible for Infocom's major graphic role player BATTLETECH.

Up and running simultaneously were three versions, IBM, Comm 64 and Amiga, all looking pretty much the same graphically (a fantastic achievement for the 64) and as we were seated, we were treated to a lightning-quick tour of the whole game via Jeff's special cheat routine which he used in developing the game.

Infocom have joined forces for this project with Westwood Associates, whose own game THE MARS SAGA is reviewed this month, and their involvement has a lot to do with the battle and strategy routines in BATTLETECH. The game boasts over FOUR MILLION locations which just has to be the biggest role-player ever, and the game is not just a hack-and-slay copy of all others of the genre, it really does have a finely interwoven storyline. Coupled with that is a new approach, which Infocom call "emotive out-takes". These are on screen windows which display the emotive responses of the characters as well as zoom in on particular battle action sequences in the game. All-in-al Battletech is a big gamble for Infocom, it is really something entirely different to what they are known for and in time we will find out if the gamble has paid off.

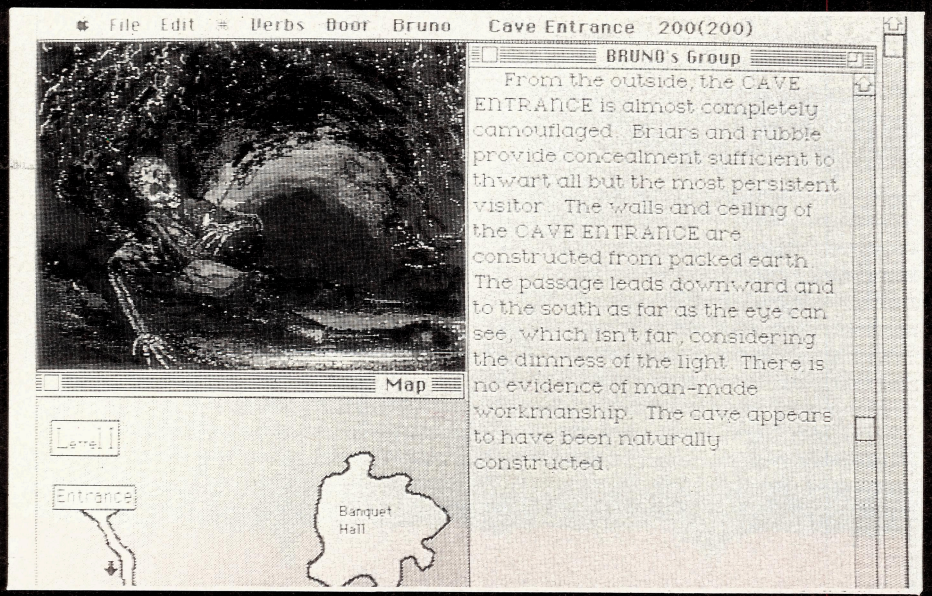
Moving on from Jeff's office, we enter the domain of Lebling, one of the most well-known Infocom authors, whose list includes, all the Zorks, Enchanter, Starcross, Suspect, Spellbreaker and Lurking Horror. He is currently hard at work on SHOGUN, his first graphic enhanced adventure. When I asked about his famous phrase concerning graphics in Infocom adventures, the one that went "we stick our graphics where the sun don't shine", Dave answered honestly. "At that time, computers had a limited memory capacity and only rudimantary graphic capabilities. Our interactive fiction stood out for its richness and depth in comparison to others. Today, with the graphic and memory power of our computers we feel that we really can add an exciting visual dimension to our stories without sacrificing any of the qualities that our customer'as love." Looking at the pictures in SHOGUN which are really quite lovely, I have to agree with him. "The graphic element has enabled us to do different things with our games" he continued, "Steve Meretzsky in ZORK ZERO has made some quite fabulous visual puzzles that really take some working out".



Dave has worked very closely with James Clavell, author of the original Shogun. "He has read the script in the game, and overseen every aspect of the development. Shogun is different from say ZORK in that the player's success is more reliant upon his/her ability to think and make decisions as Blackthorne (the hero) would, rather than solving complicated puzzles".

Zork Zero was next, and this has

been billed as a prequel to the Zork series, when the underground Empire was about to collapse, and what indeed was the cause of it. It has over 200 locations, and more puzzles than all three Zorks, it is the biggest adventure yet from



Infocom. The graphic puzzles mentioned by Dave really are cleverly implemented, with such exotic names as Peggleboz, Sharfem, and Double Fanucci, which is a sort of picture instead of words type game that make up a sentence, the only problem being that it is structured BACKWARDS! Great.

A quick look at Quarterstaff and Journey, and then it was over, time to return to my hotel, and ponder that asked question, is Infocom still the great force it was? The answer is a mighty yes. So a dream come true, I met my heroes and role models, but more was to come. Next month I will tell you about my West Coast tales of adventure, till then it is news desk time.

ADVENTURE NEWS

MAGNETIC SCROLLS WIN AWARD
Mag Scrolls latest adventure CORRUPTION was voted Game Of The Year at the 1988 Personal Computer Awards. This follows the enormous success of Guild Of Thieves, which was given the accolade of Game Of The Year at the British Micro Awards last year. It seems that Mag Scrolls have finally got the recognition they deserve as Britain's number one adventure house. Sorry Level 9, maybe you will regain the top spot next year.

ULTIMA V AT LAST
After many months of promises and false hopes. Origin has at last released Ultima V for the 64. As reported, the game comes on four double sided disks, and carries a number of new features that previous Ultimas lacked. Review next month.

LEVEL 9 ACTIVE AGAIN
Level Nine after releasing LANCELOT and INGRID'S BACK are set to release another mini-epic entitled SPOOK (working title) in which you have 24 hours to try to find your murderer and free your spirit forever! Sounds completely different to anything they have done before.

CCI COMES TO THE RESCUE TO DAVID PICKING
If you remember my plea a couple of issues back, to the money software houses who are not accepting home grown adventure products written on a commercially available utility, you will remember one David Picking, who managed to get a 9 score from me with his adventure CITADEL. It seems that after my review, he repitched Incentive to have a closer look at the game, and was pleased to learn that they indeed did take it more seriously this time round. He received a personal reply, which stated that they thought the game was "very enjoyable and professionally presented", and mentioned that they could soon be returning to publishing adventure software again. They kept the hint sheet and my review so David is very confident that at last he is getting somewhere. Well done, mate, and about the prize I sent ... it is OK to send me back the game as you already have a copy, and I will send something else, or do you have a preference? Tell me and I will send it to you forthwith. Also, I read the review of CITADEL in Adventure Probe, and it is good that Mandy Rodrigues agrees with me, so now you have two people on your side!

NEW ADVENTURE HOUSE
New software house Chrysalis are releasing a graphic adventure entitled PRISON, about a convict on a distant Penal Planet who hears of a rumour about an escape ship hidden on the planet somewhere. The player must search for clues, but the location is only know to a few, and the knowledge is a closely guarded secret.

ADVENTURE LETTERS

Dear Andy
After reading about your request for adventure top tens, I am sending you my list, which consists mainly of role playing games. 1. ALTERNATE REALITY (DUNGEON) 2. STARFLIGHT 3. BARDS TALE 4. MIGHT AND MAGIC 5. SUNDONG 6. ULTIMA II 7. DESTINY KNIGHT 8. ENCHANTER 9. UNIVERSE AND SUSPENDED 10. ALTERNATIVE REALITY (CITY). I started playing Dand D in '82. Do you remember TELENGARDE, LEGACY OF LLYLGAMA, AND EMPIRE OF THE OVERMIND?
Rezas Clyro, Surrey

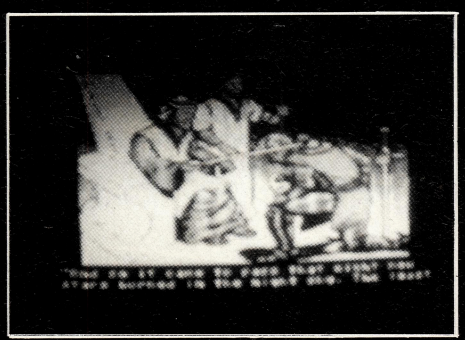
As a matter of fact, Rezas, I do remember EMPIRE very well. Some friends of mine got together with me one weekend and we played it for 24 hours non stop!

Dear Andy
I am writing from across the miles for many reasons. First of all G'day. Secondly, I'd like to say you write the best and longest adventure section of all, although you should have a tips section each month. The main reason I am writing, is for help with Rigels Revenge. How do you leave the flat without getting shot. I have tried using the red button on the medkit for strength but I can only bend one bar, not enough for me to squeeze through. Keep up the good work.
Danny Jensen, Australia

cont. on next page

G'day mate, good of you to write cobber. You are on the right lines with using the medikit, and should persevere with bending the bars. A little repetition of the same thing will reward you with a bigger space. I always put in tips if there is room.

Dear Andy
Thanks very much for printing my letter in the July issue, and thanks for the Knight Orc hint. I have just read your review of the Bards III game, and that you will offer a prize to whoever finishes it before you do. I enclose the final screen photo for you. Also here are some general adventure hints.



QUESTRON To get loads of money deposit all your gold in the bank, then attack the guards in order to die. You will be resurrected and now have 200 gold pieces. Visit a bank, and you will find your original deposit still there. Repeat this as many times as you like, as each time you get resurrected you get another 200.

JACK THE RIPPER Examine the knife closely, and cover the ink bottle when throwing it out of the window.
Oliver Naujoks, West Germany

Thanks for your picture Oliver, and I will be sending a prize straight off. Well done! Many thanks also for your tips, the rest I shall put in next month.

Dear Andy
I refer to your article in CCI concerning Bards Tale III. In it you stated that anyone finishing the game before you would be eligible for a reward. Please find enclosed photos of the final screen. I would be obliged if you would send any reward to Mr Douglas Thomson at the above address. Please note that I will follow this letter with the complete solution and maps in 2 or 3 days.
Douglas Thomson, Surrey

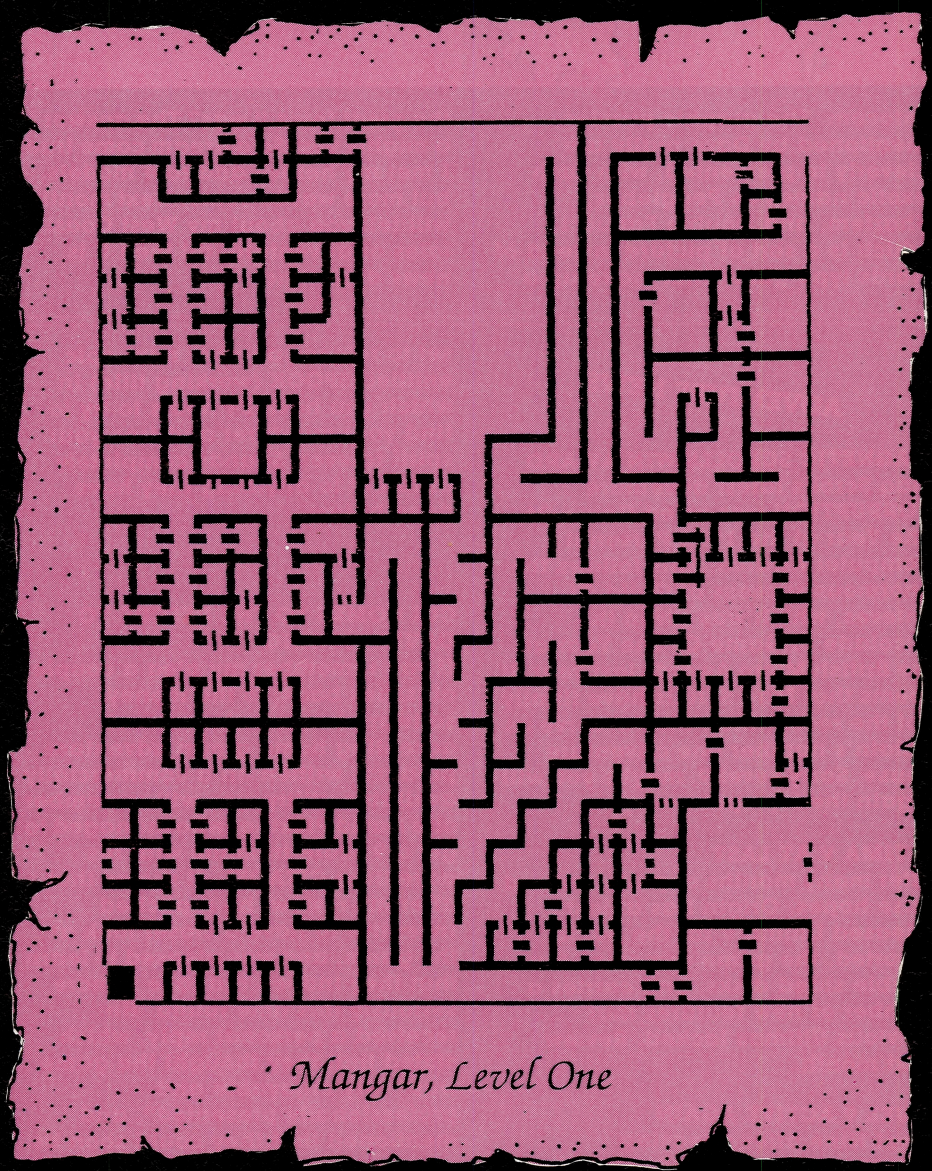
My, what a formal letter Doug, but nevertheless, you finished it! Well done, and yes a "reward" will be forthcoming if you will permit me to compensate you accordingly and to which I would be deeply honoured if you would accept such as I deem necessarily relevant according to your wishes kind sir.

A VERY FULL POSTBAG THIS MONTH AND NOT ENOUGH ROOM FOR ALL YOUR LETTERS. MORE NEXT TIME.

BARDS TALE SOLUTION CONTINUED...
MANGARS DUNGEONS 1-2
Now the final test. We are healed and rested and our fighting strength is again a fair number. We are ready to challenge the vile Wizard in his lair. Only one thing rankles, the rogue has disappeared taking with him the silver shapes.

We entered Mangars Domain by ascending the stairs in the third level of the sewers, and using the Key of Onyx. There are countless creatures here, but they are no match for us now. A magic mouth lectured us on the virtues of perserverence. Soriac informed me tht the words of the mouth are in fact the means to unlock a door in the N.E. section and get us to the next level.

A magic mouth gives us a riddle "two shapes yours, and one's around, speak the shape, and final found" Soriac knew the answer. "A circle" he said, and was provided with a flat silver circle that matched the ones stolen by the rogue. We hope that we do not need his damned shapes. The demons and vampires that are here are hitting us hard, and our number lessens, but the treasure here is wonderous beyond compare. We gather it quickly and proceed to the next level, through the door in the south east section ... TO BE CONTINUED ...



Mangar, Level One

continued on page 102

I·C·P·U·G

the Independent Commodore Products Users Group is the largest and most friendly computer club in the country

- **Many local groups with regular meetings**
- **Superb newsletter magazine 110+ pages, bi monthly.**
- **Back issues 1987 available to all. £1.50 each. All 6 issues £9.**
- **We support all CBM, Pet, Vic 20 and all Amigas.**
- **FREE Software Library of PD programs for all machines.**
- **Over 300 disks of Amiga PD software available free to members plus p&p.**
- **Help and Advice. Discount scheme.**
- **Subscription only £13 1989 per year (UK) plus £1.00 joining fee.**
- **Before applying for any software please wait for your membership details to be sent to you.**
- **Overseas prices on application.**

If you are seriously interested in using or programming any Commodore computer, then joining ICPUG is a must!

For full details, send a stamped addressed envelope to:

ICPUG Membership Secretary, Jack B. Cohen,
30, Brancaster Road, Newbury Park,
Ilford, Essex, IG2 7EP.
01-590 8849 Day 01-346 0050 Ev. & W'ends.

THE MPS803 PRINTKIT IV

AT LAST top quality performance from your MPS803 printer. Simply fit PRINTKIT IV for:

- TRUE DESCENDERS on your original character set
- *an attractive alternative ITALIC character set*
- **an emphasised BOLD option**
- single pass UNDERLINING

BEST OF ALL, unlike software methods, PRINTKIT IV will actually *speed your printer up!* At just £30 (all inclusive)* PRINTKIT IV adds a whole new dimension to your Word Processing and Listing.

Orders by cheque or P.O. please to AVON PRINTER TECHNOLOGY at the address below.

AVON PRINTER TECHNOLOGY

SWINDON HOUSE; 4, HOWARD ROAD; SOUTHVILLE;
BRISTOL BS3 1QH Telephone BRISTOL (0272) 354116
(enquiries from non-UK Distributors welcome) *add £2.00 P&P for overseas orders

POOLSWINNER II

THE ULTIMATE POOLS PREDICTION PROGRAM

Boxed, with detailed instruction booklet

- **MASSIVE DATABASE** Poolswinner is a sophisticated Pools prediction aid. It comes complete with the largest database available – 22000 matches over 10 years.
- **PREDICTS** Not just SCOREDRAWS, but AWAYS, HOMES and NO SCORES.
- **SUCCESSFUL** SELEC guarantee that Poolswinner performs significantly better than chance.
- **ADAPTABLE** Probabilities are given on every fixture – choose as many selections as you need for your bet. The precise prediction formula can be set by the user – you can develop and test your own unique method.
- **SIMPLE DATA ENTRY** All team names are in the program. Simply type in the reference numbers from the screen. Or use FIXGEN to produce fixture list automatically (see below).
- **LEAGUE AND NON-LEAGUE** All English and Scottish League teams are supported, and also the non-league sides often used on pools coupons.
- **PRINTER SUPPORT** Full hard copy printout of data if you have a printer.

PRICE £18.00 (all inclusive)

NOW AVAILABLE

FIXGEN 88/9

AT LAST: No more struggling for hours to get the fixture list into the computer. FIXGEN has been programmed with all English and Scottish League fixtures for 1988/89. Simply type in the date, and the full fixture list is generated in seconds. Fully compatible with Poolswinner. Yearly updates available.

POOLSWINNER with FIXGEN £19.50 (for both)

COURSEWINNER V3

THE PUNTERS COMPUTER PROGRAM

NOT JUST A TIPSTER PROGRAM, Coursewinner V3 can be used by experts and occasional punters alike. You can develop and test your own unique winning system by adjusting the analysis formula, or use the program in simple mode. Coursewinner V3 uses statistical analysis of major factors including past form, speed ratings, course statistics, prize money, weight, going, trainer and jockey form etc, etc. It outputs most likely winners, good long odds bets, forecasts, tricasts etc. The database includes vital course statistics for all British courses. You can update the database – never goes out of date. *FULL PRINTER SUPPORT.*

PRICE £18.00 (all inclusive) includes Flat AND National Hunt versions.

AVAILABLE FOR
All supplied on tape ... (Automatic Conversion to disc)
AMSTRAD CPCs
BBCs
COMMODORE 64/128
SPECTRUM

DISCS ... (Add £3.00)
AMSTRAD PCW
IBM Format
COMMODORE AMIGA
ATARI ST

Send Cheques/POs for return of post service to ...

selec SOFTWARE

VISA Access

phone 24 hrs

62 ALTRINCHAM RD, GATLEY, CHEADLE, CHESHIRE SK8 4DP. ☎ 061-428 7425

(Send for full list of our software)

TRADELINK INTERNATIONAL LTD, Unit 4, Stechford Trading Estate, Lyndon Road, Stechford, Birmingham B33 8BU. Tel 021 789 7050.

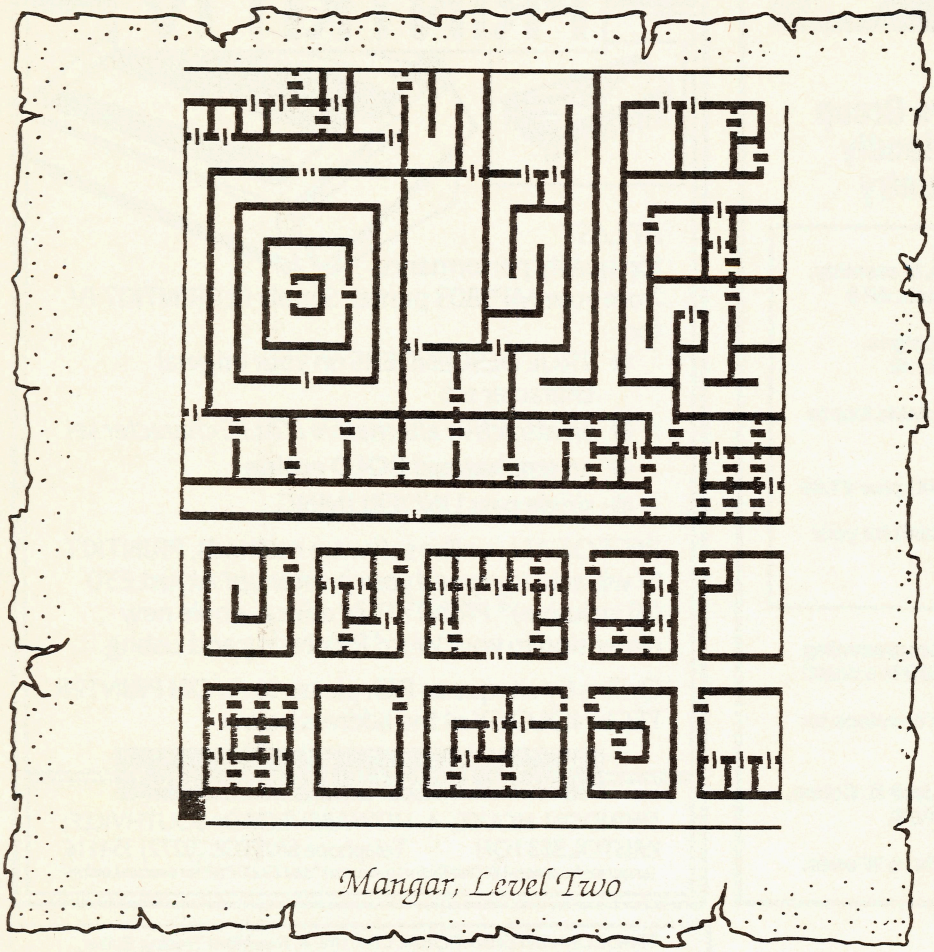
C64 Cassettes		C64 Cassettes	
Bionic Commandoes	7.95	Last Ninja 2	9.95
The Gt Giana Sisters	7.95	Skate Crazy	7.95
Cauldron II	1.99	Thrust II	1.99
Brainstorm	1.99	Stormbringer	2.99
Deluxe Monopoly	9.99*	Soldier of Light	7.99
Every Second Counts	6.95	Football Manager II	7.95
Dark Side	7.95	Roadblaster	7.95
Salamander	7.99	Empire Strikes Back	7.95
Slimeys Mine	2.99	Battleships	2.60
Netherworld	7.95	19 Pt 1 (Boot Camp)	7.95
President is Missing	7.99	Mickey Mouse	6.99
Pandora	7.49	Beyond the Ice Palace	7.49
Blood Brothers	7.49	Vixen	7.45
The Games Winter Edition	7.99	Ninja Scooter Simulator	1.99
Barbarian	7.49	Live and Let Die	7.49
Barbarian II	7.99	Yeti	7.95
Teladon	7.99	Afterburner	7.99
S.D.I.	7.99	Parisian Knights	12.99
Diamond	7.99	Spindizzy	6.99
September	7.95	Hi-jack	7.95
Triple Decker Tazz	1.99	River Rescue	1.99
Skook Daze	1.99	League Challenge	1.99
Thunderhawk	2.99	Oops	7.99
Chartbusters	7.99	Computer Classics	3.99
Lead Runner Trilogy	7.95	Rignwars	7.99
ACE	2.99	Enemiesd	7.99
Steve Davis Snooker	1.99	Frightmare	7.95
Wizzards Lair	1.99	Cave Fighter	1.99
Syntax	1.99	Wolfpack	1.99
Hi Q Quiz	1.99	Purple Heart	7.95

Most titles also available on disc. Price on application.
Hundreds more C64 titles available. SAE for free brochure

Amiga		Amiga	
Aaargh	13.90	Alien Syndrome	13.75
Armageddon Man	16.95	Arctic Fox	15.00
Arkonoids	17.50	Bubble Bobble	12.99
Bionic Commandos	15.99	Battleships	14.50
Balance of Power	22.50	Bad Cat	16.50
Ball Raider	13.95	Brainstorm	9.75
Bards Tale I or II	18.00	Captain Blood	17.99
Carrier Command	16.50	Crash Garret	18.50
Crazy Cars	16.50	Defender of Crown	21.50
Dark Castle	16.50	Deluxe Video	49.50
Deja Vu	21.50	Deluxe Production	99.00
Deluxe Print	17.50	Deluxe Music Cons. Set	49.50
Deluxe Paint II	45.00	Flight Sim II	37.50
Earl Weaver Baseball	17.50	Flintstones	13.50
Feud	7.95	Ferrari Formula One	19.45
Football Manager II	13.75	Gryzor	17.50
Fright Night	16.50	Golden Path	13.50
Gee Bee Air Rally	15.50	Gold Runner	17.50
Gunship	16.50	Hunt for Red October	16.50
Garrison I or II	16.50	Impact	9.99
Interceptor	17.50	Instant Music	19.00
Insanity Fight	16.50		

Amiga		Amiga	
International Soccer	13.45	Jet	26.00
Jinks	16.50	Joe Blade	6.95
Jinxter	16.50	Jewels of Darkness	13.95
Xing of Chicago	20.50	Kickstart II	7.99
Leaderboard	16.50	Live and Let Die	15.50
Marble Madness	17.50	Mean 18 (Golf)	19.95
Pandora	14.50	Pawn	16.50
Nigel Mansells Grand Prix	15.00	Rocket Ranger	22.50
Rockford	14.50	Rolling Thunder	16.50
Scenery Disc 7 or 11	16.99	Shadowgate	19.50
Silent Service	16.50	Strip Poker II	9.99
Star Glider	16.50	S.D.I.	22.50
Sidewinder	7.99	Tetris	13.95
Test Drive	17.95	Three Stooges	19.50
Time and Magik	13.50	Vampire Empire	12.95
Winter Olympiad	12.95	World Tour Golf	19.50
Xennon	15.00	Yeti	8.50

Stockists of Software for Atari/Spectrum/Amstrad/Apple. Send large SAE for Free Brochure and Price List stating make of machine and model.
Please advise full name/address & telephone no. when ordering.
Orders over £5 p&p free. Less than £5 and Europe add 50p per item. All orders normally sent within 2 days subject to availability.
Free poster with every order over £10.
WARNING: Our prices will shock you.
Cheques/Postal Orders made payable to Tradelink International Ltd

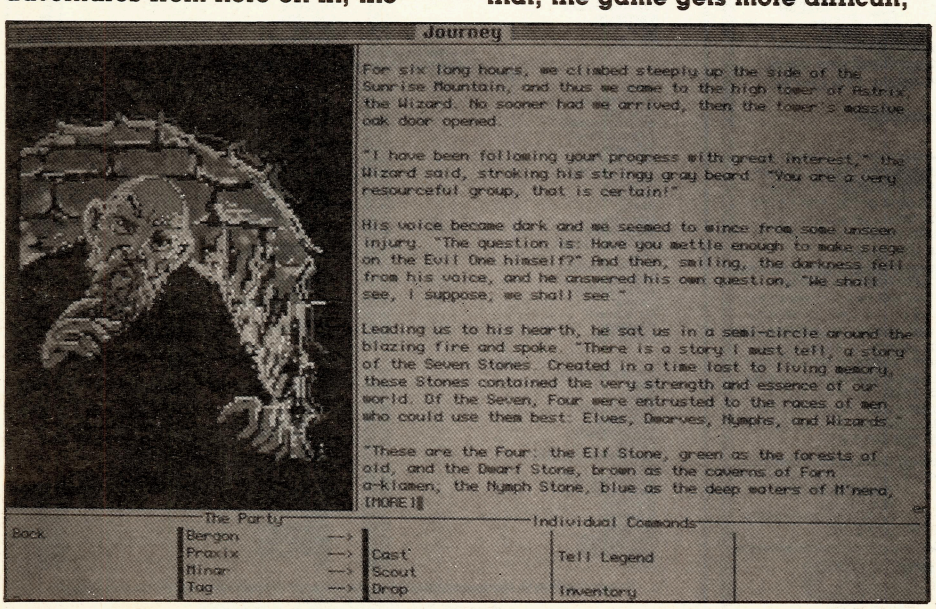


Mangar, Level Two

ADVENTURE REVIEWS

INGRIDS BACK
LEVEL 9 £14.95
After trying out various publishing houses, Level 9 are back to doing their own thing, and "Ingrids Back" is the sequel to Gnome Ranger which generally had good reviews. Essentially, as with all Level 9 adventures from here on in, the three parts to the game are carefully structured. The first part, in which you have to get Ingrid to gather signatures for a petition against Jasper Quickbucks attempts to turn the village of Little Moaning into an estate of yuppie homes, is more of an introduction to the characters, with only one or two puzzles to stump you with. By the way, you lose marks for getting the wrong names on the petition. After that, the game gets more difficult, as in part two, Ingrid has to defend Gnettlefield farm from Trolls intent on no good, and finally in part three, infiltrate Jaspers Manor house and pull the plug on his dirty deeds. There are some lovely moments in the game, like when Ingrid visits Mrs Tackhammer in her bedroom, only to find Seamus hiding in the wardrobe! When she offers him the petition he hastily signs it. I wonder why?

The only real moan I have is that as a gimmick putting G in front of every word beginning with an N was funny to start with in Gnome Ranger, but to do it again all through Ingrid becomes a trifle tedious. That apart, Ingrids Back is a joyous romp through the tales of Gnettlefield.
PERSONAL RATING 8



THE MARS SAGA
ELECTRONIC ARTS £14.95
2055 AD. Man has finally colonised Mars, but not in a way you would think. It is a prison colony that uses convicts to mine the planet for the precious minerals that exist there. You play the part of Tom Jetland, a poor mercenary, who hears about some trouble on Proscenium, a distant outpost on Mars, where all contact has been lost. If you can unravel the mystery your freedom is guaranteed. You start off in a bar in Primus the biggest City, where new recruits could be found to help you get started.

This science fiction role-player has some really innovative features. Each character can learn up to 21 advanced skills, from programming and languages through to Munitions and street skills. There is an auto-mapping feature that can be saved as you play, and all combat takes place in top down overview, so you can plan your strategy easier, or indeed let the computer do it for you.

There are plenty of sub-missions to go in order to gain money, and each place you enter, has Bards tale type pictograms detailing the scens. A very user friendly adventure, that is not hard in the Ultima sense, but lets you play rather than kill you off at the earliest opportunity.

Well worth a look, as a meritable addition to your role-playing collection.
PERSONAL RATING 8

THAT'S IT FOR THIS MONTH. MORE FROM MY TRAVELS IN AMERICA NEXT TIME, AND REVIEWS (AT LAST) OF ULTIMA V AND POOLS OF RADIANCE. SEE YOU THEN.

CP/M — USING SUBMIT FILES

Chris Wright of I.C.P.U.G. has pointed out to us that CP/M is still used by many Commodore people who would benefit from a little automation

If you use CP/M frequently you will find yourself using the same commands over and over again. Sometimes these commands can be quite a complex syntax. SUBMIT.COM on your systems disk can automate just about anything you can think of. What SUBMIT does is read from a simple text file with the file extension. .SUB a series of command lines you have previously typed in from the keyboard. It then creates a temporary file with the extension .$$$ which matches the .SUB file and, one by one, processes the commands and strips them from the temporary file. When the last command is dealt with, the temporary file is erased, which is why, unless you have a systems crash, you will never see the .$$$ in your disk directory. Apart from the imagination to create it, you need the means to do so and this is where ED.COM or better still VDO25.COM (I.C.P.U.G. P.D. Disk) comes in.

When first boot CP/M, the system looks for a file called PROFILE.SUB on the boot disk. If not there you drop straight into the familiar A> prompt. If such a file is found then the system starts to process the commands contained in that file. Remember that SUBMIT.COM must also reside on the boot disk for the PROFILE.SUB file to be interpreted. You must not cover the write protect notch either as SUBMIT.COM must write a temporary file to the boot disk. It is also a good idea to make sure that there is at least 10K free space on the boot disk to allow for large batches of commands to be processed. PROFILE.SUB may be used to parameterize your system, or for running a specific program. Knowing this, you may well set up individual boot disks for various applications such as booting up a modem, a database or word processor and all will then run automatically. Nearly all computers these days have this facility and it is very handy and time saving. It also frees the mind from having to remember what to do each time.

An example of a PROFILE.SUB is as follows:-

```
SETDEF *,A: [ORDER=(COM,SUB),
TEMPORARY=A[]
CONF PRT1=ASCII8, 40COL=OFF,
VOL=0
DATE SET
```

SETDEF is a program which also comes with your systems disk and does good things for you, more so if you have more than one drive or the Ram expansion. The first line of the PROFILE.SUB file uses this utility to first set a drive search chain. The *,A: portion says to the system, 'First look for a program on the currently logged drive and if you don't find it look for it on drive A:' So if your screen prompt is B> and you call a program that resides on the A: drive, CP/M will find and execute it. The next part [ORDER=(COM,SUB) tells the system to first check for a .COM file with the name you specify, and then, if unsuccessful, execute a .SUB file with the same name. Thereafter instead of having to type SUBMIT MYFILE you just have to enter MYFILE and provided SUBMIT.COM is on the same disk, away we go. The last section of that line tells CP/M to create the temporary file required by several different utilities (the .$$$ file) on a specific drive. This is especially useful if you have a Ram expansion pack as you can specify TEMPORARY=M: then you don't have to worry about insufficient room for temporary files on a floppy disk.

" The next part turns off the 40 column screen making the system speed up by about 8 to 10% and the final part turns off the sound, which also quickens the clock speed of the processor "

The next line invokes a file called CONF which further configures your system. This sets some controls that will optimise the session for you. The first part tells the system what kind of printer you have ASCII or CBM and what secondary address used. My Laser uses address 8 to get upper and lower case with no auto line feeds. The next part turns off the 40 column screen making the system speed up by about 8 to 10% and the final part turns off the sound, which also quickens the clock speed of the processor. The last line allows the setting of the time and date.

Another example of a SUBMIT freeing you from having to look it up or even remember it is a way in which you backup some data files on another disk into a different user area, thus keeping them safe. Superbase users would Export the file. The syntax is:- PIP A:[G9]=8°*.DAT[A] This copies all changed files of type .DAT from disk B: to user area 9 on disk A: Just to look at this would be a paid to

cont. on next page

continued from page 103

CP/M — USING SUBMIT FILES

remember evey time so using VDO25.COM I created this line and saved it as BACKUP.SUB. Therefore all I had to do was type BACKUP and that particular line was executed and the backup done. Now we are getting somewhere. No more A> prompts, the system is really swining!

How about this one. You can also put program input into a SUBMIT file using the < character. This one is set up for the Ram expansion and although it is explained afterwards, if you have digested what has gone before you will start to see what is happening.

```
PIP
<M:=A:PIP.COM
<M:=A:ERASE.COM
<M:=A:PCFILE.COM
<M:=A:*.DAT
<:=A:*.NDX
<
M:
PCFILE
PIP
<A:=M:*.DAT
<A:=M:*.NDX
<
ERASE *.DAT[C]
ERASE *.NDX[C]
```

This example first copies PIP and ERASE and PCFILE into Ram. Then it copies the data files all carrying the extensions .DAT and .NDX from A: disk into Ram. The final < is a carriage return to exit PIP. Next the PCFILE is run from Ram. Note that the submit file is not finished but suspended until you quit from PCFILE. When you have finished using your applications program PCFILE then PIP is again invoked and copies all the altered data files back to the A: disk. These data files are then erased from Ram using the 'C' option of ERASE which asks for confirmation before erasure.

You can also put messages on the screen in the middle of a SUBMIT operation using a feature of PIP that copies a text file to the screen.

```
PIP
<CON:A:MESSAGE.TXT
DIR B:
```

In this case the MESSAGE.TXT warns the user to put a disk in drive B: and press return. Note the absence of the lone < which forces the user to press return to end the PIP program and continue with the SUBMIT file's commands.

Now it's up to you to fit all the bells and whistles and make it an all singing all dancing operating system. A lot better than that lone intimidating A> prompt? If you wish to know more about I.C.P.U.G. and how we can help you with advice and our very technical newsletter please write to I.C.P.U.G. at 30 Brancaster Road, Newbury Park, Ilford, Essex, IG2 7EP.

C. W.

BOWIE ELECTRONICS
THE COMPUTER CLINIC

ABERDEEN'S PREMIER DISCOUNT COMPUTER CENTRE

LARGE STOCKS OF HARDWARE & SOFTWARE FOR THE FOLLOWING MICRO COMPUTERS

Amiga 500
Amiga 2000
Commodore 64
Commodore C16+4
Vic 20
Sinclair Spectrum 48
Spectrum 128
Spectrum +2

SAMPLE HARDWARE DISCOUNTS

	RRP	Our Price
Evesham Exeleretor Disk Drive + 5 Games	£159.95	£132.95
Evesham Slimline Keyboard	£19.95	£16.95
Commodore 1530/1531 Cassette Deck	£44.95	£26.95
Commodore 64 Power Supply	£29.95	£14.95
Cumana CAX 354 Disk Drive for Amiga 500	£139.95	£99.93

★ SPECIAL OFFER ★
ALL ORDERS OVER £35 WILL GET A FREE OCEAN T-SHIRT AND GAME

ALL COMMODORE SOFTWARE UP TO 50% OFF

Games programmers wanted. Top royalties paid – please send samples of your work.

PHONE: 0224 895159
22 MENZIES ROAD, ABERDEEN

VISA

HARP ELECTRONICS
237/238 TOTTENHAM COURT RD
LONDON W1P 9AD
TEL: 01-636-4611
01-580-1873

MACDONALD ELECTRONICS
70 OXFORD ST,
LONDON W1.
TEL. 01-631-5298

LOW, LOW PRICES ON DISCS, PRINTER PAPER, PRINTER RIBBONS, ADDRESS LABEL, ETC.
DISC STORAGE BOXES AVAILABLE

	3½" (3·5)			5¼" (5·25) 96TPi		
	MFD/DD	MFD2DD	MFD2HD	MD2D	MD2DD	MD2HD
SONY	12.75	13.50	39.95	6.95	12.95	19.95
MAXELL	–	14.95	44.95	7.45	–	18.95
3M	–	14.95	39.95	7.95	–	18.95
DYSAN	–	14.95	–	–	–	16.95
VERBATIM	–	14.95	31.95	7.95	–	–
KODAK	–	12.95	–	7.95	–	–
BASF	–	13.95	–	6.95	–	–
JVC	11.95	13.95	34.95	6.95	–	11.95

CF2 3" DISC FOR AMSTRAD COMPUTERS – BOX OF 10

FROM £19.95

ALL PRICES ARE FOR BOXES OF 10 & ARE INCLUSIVE OF V.A.T.

PLEASE PHONE US FOR QUANTITY DISCOUNTS

COMPANY ORDERS WELCOME!

SPECIAL OFFER THIS MONTH!

SONY 3½" MFDD	£13.50	BOXES
BULK 3½" MF2DD (SONY)	£10.50	OF
JVC 5¼" MD2HD	£11.95	10
KODAK 2DD	£12.95	

WE ALSO STOCK T.V.s, VIDEOS, HI-FIs, CAR-AUDIO, TELEPHONES, CALCULATORS & COMPUTERS!
WORLDWIDE EXPORT · AIR FREIGHT AND SPECIALISTS – SHIPPING ARRANGED!

The U.K. Amiga User Group

Are you new to the Amiga, finding it difficult to harness the power of this amazing computer ?, then what you need is help from the largest group of Amiga enthusiasts in the world outside of the United States.

Members receive:

- Excellent discounts on software
- Technical support and on line help
- Superb hardware reductions
- A bi-monthly newsletter of over 60 pages!
- Access to a PD library of over 250 disks
- Use of an Amiga only bulletin board

DON'T HESITATE - JOIN NOW and start to appreciate what Amiga computing is all about.....

For further details write, enclosing a stamped addressed envelope to:

The U.K. Amiga User Group,
66, London Road,
Leicester. LE2 0QD.

Or Telephone - **Leicester (0533) 550993**

PUBLIC DOMAIN SOFTWARE

FOR THE C64 & 128

OVER 120 DISKS FULL AT JUST £2.99 PER DISK!
SEND FOR YOUR FREE CATALOGUE TODAY

★ ★ SPECIAL GIFT PACKS ★ ★

Each Pack consists of 4 disks & comes in an attractive plastic library case. They make an ideal Christmas gift!

Business & Utilities Pack - Approximately 80 programs including Wordprocessors, Databases, Spreadsheets, Accountancy Software, Disk Utilities & much more!

Music & Graphics Pack - Over 120 tunes with SID/PIC player which gives display of musical score as tunes are playing. Also includes Doodle Picture Slideshow & some great Graphical Music Demos.

Educational Pack - These programs will turn your C64/128 into a powerful learning tool. Many of the programs on these disks were developed for use in schools. Suitable for ages 3+.

Games Pack 1: Arcade type Games - Some 80 arcade games which will provide many hours of amusement.

Games Pack 2: Adventures & Sports Games
Approximately 30 Adventure games & 22 Sports Simulations!

Please note: Disks featured in special Gift Packs are not dublicated in our catalogue.

Please make Cheques/POs payable to Kingsway Computer Services. Write or Phone for our full catalogue which gives

KINGSWAY COMPUTERS PCP
140 RUSHDALE ROAD, SHEFFIELD S8 9QE
TELEPHONE 0742 588429

COMMODORE-16 & PLUS-4 PRODUCTS

BOOKS

Commodore Plus/4 Prog. Ref. Guide	£15.95
The Working Commodore-16	£ 5.95
Commodore C16/Plus-4 Companion	£ 5.95
C16/Plus-4 Reference Book (Anco)	£ 7.95
100 Programs for the C16	£ 8.95

SOFTWARE ON CARTRIDGE

Pirate Adventure	£ 2.95
Strange Odyssey	£ 2.95
Triple Pack (above + Atomic Mission)	£ 5.95
Viduzzles	£ 2.95
Script/Plus (Wordprocessor)	£12.95

GAMES ON TAPE @ £1.95 each or 6 for 10

Mayhem	Ten Little Indians	BMX Racers
Harbour Attack	The Time Machine	Squirm
Crazy Golf	Circus	Fromula I Simulator
Fireant	Escape From Pulsar	Spectripede
Exorcist	The Golden Baton	Tutti Frutti
Enigma	Wizard of Akyrz	Big Mac
Corman	Perseus & Andromeda	Mr Puniverse
Treasure Island (+4 only)	Waxworks	Megabolts
Auriga	Torpedo Alley	Molecule Man
Varmit	Runner	Master Chess
Bubble Trouble	Guzzler	Starforce Nova
Trojan Lightpen £14.95	Summer Events £6.95	Winter Events £6.95

COMMODORE-64 & 128 PRODUCTS

GAMES ON DISK		UTILITIES ON DISK	
Zork I*	£3.95	Easyscript	£14.95
Zork II*	£3.95	Pascal 64*	£12.95
Zork III*	£3.95	Assembler/Monitor*	£12.95
Starcross*	£3.95	*both for	£19.95
Suspended*	£3.95	Simons Basic Extension	£ 9.95
Deadline	£3.95	Advanced Calc Result	£14.95
Pastfinder	£3.95	Cobol (64 & 128)	£29.95
Mindshadow	£3.95	Super C (64 or 128)	£39.95
Tass Times	£3.95	Super Pascal 64	£24.95
*also available for Plus-4		Super Pascal 128	£39.95
		Super Pascal 128	£39.95
Any 3 of above for 10		Easyspell	£ 9.95

Add 50p towards p&p on orders under £5. Overseas orders add £1 towards p&p.
Access and Visa card order accepted — **Telephone: (0706) 524304**
Many more items in stock. Send SAE for complete list (state which computer you own).

ADAMSOFT
18 Norwich Avenue, Rochdale, Lancs OL11 5JZ

Ruby-Comm Communications Software for your *AMIGA*

Y2 COMPUTING LTD

The Ruby-Comm package gives you the ultimate in easy to use communications software for your Amiga. The package includes Ruby-View and Ruby-Term. **Ruby-View** is an advanced multi- window Viewdata Terminal ideal for accessing Prestel and Micronet. **Ruby-Term** provides an extensive VT52/100 emulation and also includes XModem, XModem-CRC and Advanced Kermit Protocols. A Large number of modems are supported including operation at 1200/75. All for £99.00 inc VAT and P&P

Ruby-Tel The Complete Viewdata Host & BB
This package enables you to set up your own Viewdata BB for only £199.00 inc VAT and P&P

For further information on Ruby packages or other Amiga products, please phone us or call in at our showroom.

Y2 Computing Limited **Tephone 0923-50161**
111 St. Albans Road, Watford, Herts. WD1-1RD

WINNERS

Winners of Roadblasters Competition

Winner
D. Chu
Surrey

25 Runners-up
M. Scott
Co. Down

J. Blake
Norwich

S. Farmer
Surrey

J. Consadine
N. Humberside

A.Head
Southampton

C. Miller
Dumfries

J. Vaughan
Swansea

R. Newman
Bristol

M. Hewson
Birmingham

N. Williams
Peterborough

M. Rodberro
Middx

J. Tyrell
Liverpool

J. Arnold
St. Helens

J. Temple
Colchester

I. Ramdhany
London

J. Kosonen
Finland

D. Batty
South Yorkshire

M. Jones
Leics

W. Pryddierch
N. Wales

J. Craig
Clwyd

P. Hairsine
Hull

R. Williamson
London

G. Scott
Swindon

S. Geddes
Caithness

R. Walker
Dudley

Winners of Sega Competition

Winner
R. Walker

Runners-up
C. Bell
BFPO 40

U. Chochan
London

J. Dastidar
Notts

R. Troughton
W. Yorks

M. Dexter
S. Yorks

M. Man
Essex

J. Temple
Colchester

M. Parsons
Lancs

M. Hewson
Birmingham

N. Child
East Sussex

Winners of U.S. Gold Challenge Competition

J. Arnold
Merseyside

R. Ramsden
W. Yorks

A. Head
Southampton

L. Bruce
Scotland

J. Mufazzil
London

Winners of Elite Competition

Winner
N. Thomas
Notts

20 Runners-up
D.Austen
Anglesey

R. Newman
Bristol

P. Moore
Doncaster

J. Vaughan
Swansea

J. Temple
Essex

B. Hoskins
Worcs

M. Suchoruczka
Chelmsford

A. Morling
Surrey

J. Nangle
London

Winners of Trilogic Competition

J. Blonden
Plymouth

K. Bromfield
Devon

M. Rogers
Fife

C. Morgan
Surrey

R. Newman
Bristol

J. Craig
N. Wales

W. Prydderch
Clwyd

R. Weeks
Gwent

D. Buttle
Co. Durham

J. Kosenen
Finland

P. Orton
Leicester

B.J. Clarke
Essex

C. Bell
BFPO 40

C. Heaney
BFPO 43

R. Keillor
London

C. Hallam
Middx

N.L. Barton
Cheshire

J.E. Hanson-Brown
Hants

P. Fullwood
West Midlands

R. Walker
Sedgley

M. Suchoruczka
Nottingham

R. Troughton
W. Yorks

L. Brown
Cumbria

B. McDermott
Ireland

S. Laity
Mid. Glam.

F.A. Oakley
West Midlands

J. Kaponi
London

P. Digioule
Australia

C. Moural
Essex

C. Garbutt
Basildon

J. Arnold
Merseyside

Winners of Geos Competition

Winner
A. Pooley
Cornwall

Runners-up
C. Brown
South Africa

G. Stuart
Nottingham

J. Korhamen
Finland

G. Lee
Mid-Glamorgan

N. Whinham
Newcastle Upon Tyne

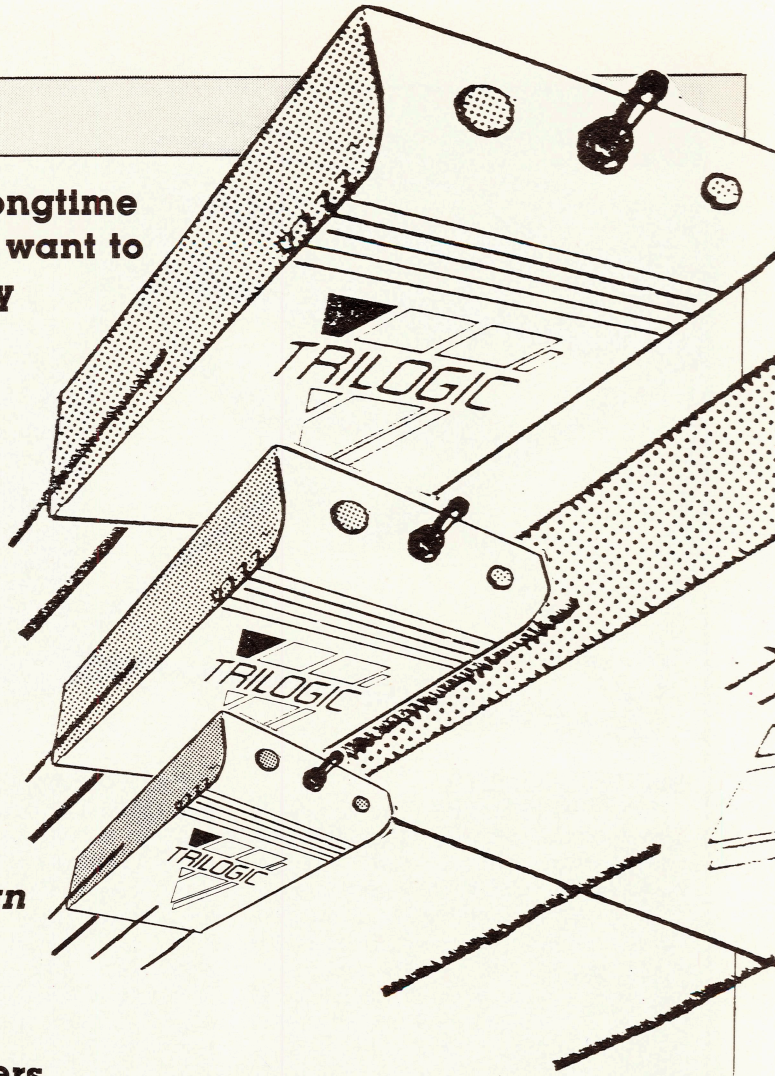
A.D. Bates
Nottingham

M. Jones
Leics

S. Hutchinson
Liverpool

T. Welsby
Cheshire

S. Kirk
Leeds



TRILOGIC'S GREAT NEW YEAR COMP!

TRILOGIC — one of the really longtime faithful Commodore suppliers want to celebrate another New Year by giving away some great prizes to 'faithful' C.C.I. readers.

You can win prizes either for a 64/128 or an Amiga — it's up to you. You have to tell us which set of prizes you want if — sorry — when, you win.

First Prize: A 64 Expert Cartridge or ***an Amiga Audio digitiser.***

Second Prize: A 64 Doctor or ***an Amiga MiniAmp.11*** (that's a stereo amplifier with two mini-speakers, of course you knew!)

Third Prize: A 64 Drive Doctor or ***an Amiga Miniamp.1.*** (That's the one with earphones).

All you have to do is answer the following questions — All the answers can be found in the Trilogic advertisement in this C.C.I. of course you have to find them (really hard comp. isn't it?)

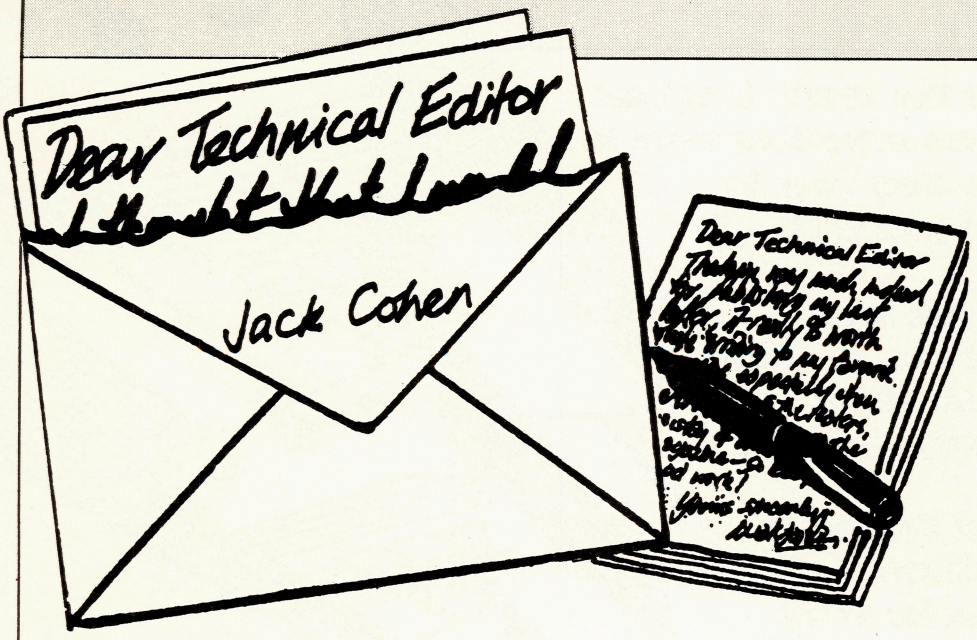
1) How quickly can a program be loaded using the New Rocket Loader?
2) How many parts will a 64 Doctor test?
3) Where will you find a Commodore Part Number Guide?
4) Which Trilogic product comes with a Cleaner/Demagnetiser?
5) Which two head checks can the Drive Doctor make?

There, no more painful than having your brain repaired with a soldering iron, is it?

Please send your answers, on a postcard to Trilogic New Year Comp. c/o C.C.I. 40 Bowling Green Lane, London EC1R 0NE.

To reach us by February 15th, 1989.

Don't forget to put 'A' or '64' to show which prize you want.



Dear Technical Editor,

A few months ago, I purchased a Commodore 128 with the following peripherals: CBM 1901 colour monitor, two (2) CBM 1571 disk drives, and a CBM MPS1200 dot-matrix printer. I have no expansion or utility cartridges attached to the computer. My main use for the computer is word processing. Currently, I use Wordstar version 3.3 (under CPM, and installed for an Osborne terminal). This is the first time I've had a Commodore, being something of an Apple fan for the last couple of years. I have always used Wordstar for writing and find it a thoroughly professional writing program.

My problem with Wordstar on the CBM 128 is that it works extremely slow, as compared to the same program on an Apple II Plus (with appropriate Z80 and 80-col. cards) or to an IBM-PC. Scrolling the document on screen, for example, with screen-up or screen-down key commands takes just about forever. When printing documents, the printhead always pauses for a few seconds after every line before starting on the next line, which makes printing under CPM very, very slow indeed. And why is it that the keys do not automatically repeat under CPM? Am I using the wrong CPM version (version 3.0 which came supplied with the computer)? Is ther any way at all to speed up my CBM 128's speed under CPM? Is there any cartridge or peripheral I can attach to the computer so that the performance of the computer measures up to the power of the software.

I really hope you can help me as I am beginning to feel that buying the Commodore 128 has been a big (and certainly expensive)! mistake. Thank you and hoping to hear from you soon.

Sincerely,
Jose Ibarra Angeles

P.S. If it's impossible to speed up the CBM 128 under CPM, can you suggest an alternative word processing program that runs under the CBM 128's native operating system? I've tried Word Writer and Vizawrite and have been disappointed. I need a word processor with powerful editing facilities, a WYSIWYG feature, spelling-back, mailmerge, smooth printing routines, and the capability to do automatic footnote numbering and insertion.

Dear Jose

The Z-80 board and CP/M as supplied with the C128 is an extra and was never intended by Commodore to be the main reason for anyone to buy the C128. For this reason I don't think you will improve speed by very much. Native mode is of course faster but you would need a WP designed around graphics in order to obtain WYSIWYG!

As you don't like VIZAWRITE then there is no WP with all the features you require.

VIZAWRITE is considered to be amongst the best available for the C128.

Dear Technical Editor,

I would refer to the programme given in the October 1988 issue namely "Bar Chart" by Frank Carson. I felt that this programme could be very useful to me on a day to day statistical basis and therefore, went through the tedious business of copying the programme given.

As you can see from the attached sample, the programme is running perfectly and it appears to save perfectly (Option 7), however, I am unable to call back and load the information saved. I have checked the entire programme line by line against a hard copy, particularly the area between 1620-1840 and find nothing apparently wrong. Perhaps I am doing something stupid in the way I am operating the programme and your help and guidance to this matter would be much appreciated.

On entering Option 1 the screen reads "enter name and data file to be loaded". This must be a Bar Data File "followed by a question mark". On inputing the name of the file, when saved, the disc drive rotates for a split second and a new question mark appears on the screen. It then continues to produce question marks endlessly and we cannot get out of the programme. Secondly, and a rather more disastrous matter from our point of view is that if we attempt to print the Bar Chart, Option 6, and fail to notice that the printer is not switched on, not only does the screen inform us that the devide is not present, error in line 3470, but we also lose all the information that we have spent some time putting in.

Are there any simple lines we can add to make this seemingly useful programme idiot proof?

Your faithfully,
Diamond Tooling Services,
West Sussex

Dear Diamond Tooling Services,

I have checked the SAVE and LOAD options and cannot find any errors other than one in line 1730.

This should have as part of the line PRINT B$ and not PRINT: b$ which will crash the program with 'Syntax error in line 1730' if the file name you enter does not exist on your diskette.

The only way to get the result that you describe is that the name of the BARDATA file exceeds 16 characters.

Therefore check that you are not adding spaces at the end of the name.

Retype the lines 1620-1840 in case of no visible corruption.

To remind you to switch on your printer add the following simple routine to your program and amend 1750 to:—

```
1570 IF S=5 THEN GOSUB 6000: GOTO 2540
6000 SCNCLR:PRINT "Make sure the printer is on then PRESS any key to continue"
GET YY$:IF YY$="" THEN 6010
6020 RETURN
```

Dear Technical Editor,

In writing to you as my son is desperate for help, he is 14 years old and saved for a very long time to get himself a computer, he has got himself a COMMODORE 16 secondhand, now we find we can't get instructions for it or parts and I would be very grateful if you can help by telling us

were he might be able to get what he wants. It's really heart breaking seeing him not knowing what to do. Please if you can help my son I'd be very grateful of any help. My son is a sick boy, so you can understand what this computer means to him.

Thanking you for any help.

Mrs. I. Wild

Dear Mrs. I. Wild

The BASIC used in the C16 can also be found in books on the PLUS4.

It is also related to the BASIC used in other Commodore computers (except the AMIGA).

You should be able to find books on CBM BASIC in most Public Libraries and this should help your son to start with simple programs.

He can also look at our printed program listings to get more ideas on how programs are written and put together.

To use the full range of the C16 you will need a book specific to the C16 (or PLUS4).

Dear Technical Editor,

Like P. WILSON (November Issue) I purchased a STAR LC-10C printer, but mine is not the colour version. I also have Mini Office II, and this letter is being produced on the word processor module.

I find the printer easy to use and the manual I thought was set out very well and I had little trouble following it. My congratulations to STAR. However, I have had a few problems concerning Mini Office II.

I have found the overall package very useful and user friendly but in conjunction with a STAR printer it poses problems. The word processor, spreadsheet and graphic modules work well with the printer. However, the database and label printer packages refuse to print out at all. Well they will print the first few files and then the printer stops and where is a message on the screen saying "PRINTER NOT PRESENT".

I wrote to Database Software and received a reply saying that the program was only designed to work on MPS 801 & 803 and Epsom printers via parellel or centronic scale.

I feel that other readers who are looking to purchase a Star printer and already have a copy of Mini Office II should be warned of the above faults. After all when I bought my copy of Mini Office II it said nothing on the outer packaging saying what printers it would support.

Your sincerely,

C. King

Mr. King provides some useful information for readers.

I contacted Database Software technical department and they do not expect any modification to the software for some time.

If there is sufficient demand to make the mod viable then they may change their minds.

Dear Technical Editor,

I have a C16, a Citizen printer (with only 70mm paper on which this letter was printed) and a Trojan light pen. My problem is when I draw a picture on the screen with the light pen and then load up the printing program, this program will not work on my printer.

I have tried altering the program but have had no luck yet. Please could you find a program what would let me print my pictures on my printer. I enclose a s.a.e. for your reply if not printed in your great magazine.

Thanks again for a great mag (I buy it every month).

Yours faithfully,

Keith Wiffen

Dear Keith

The 40 column Citizen printer has a graphic mode 6(W) x 7 (H) with a line gap of 2.75 millimetres so you could program some sort of screen dump.

Refer to your printer manual for details of graphic characters.

If any readers have managed a passable screen dump then please write in with details for Keith.

Dear Technical Editor,

I would be very grateful for any help that you can give me concerning one of the all too frequent printer problems! For the past 3 years, for business purposes we have used a Commodore 128, 1570 Disk Drive and an Epson FX80 Printer via an FCC 8K Buffer. Serial Interface daisey chained to the Disk Drive — all this works fine, no problems at all.

In March 1988 we purchased a Commodoare 128D, when we connect the FCC Interface to the Serial Port of the 128D and using exactly the same program as we use on the 128, we get no response from the printer and the error message 'Device not Present'. We have found that by changing the 'Open' statement from Open 4,4,1 to Open 4,4 and then running the program we get the response 'Ready' (after about 1 Second) but the printer remains innactive.

The printer works O.K. via the User Port using a 'Commodore Connexion' interface, but as a business user we do miss the 8K Buffer when printing large numbers of invoices, etc. Obviously, having purchased the 128D in March we have had 7 frustrating months of experimenting therfore in desperation we seek your expertise — please!

Yours faithfully,

Lewis M. Beadle

***Dear* Lewis**

Have you tried a direct command (outside the program) such as:—

OPEN 4,4:PRINT£4:CLOSE4

and see if the printer responds with a line feed.

I notice that you altered an OPEN statement in your program.

Is it all in BASIC?

If not then perhaps the machine code OPEN routine is also used.

I mention this because the OPEN routine to the RS232 port has (or had) a bug.

Where 'DEVICE NOT PRESENT' is the error message returned.

To fix this would either require an updated ROM (available from many repairers) or correction of the program to avoid X-line handshaking in the OPEN routine.

The routine returns with the status register carrybit set if the FCC buffer responded and clear if no response.

Unfortunately it should be the other way round.

Dear Technical Editor,

I have found a simple way to get the 64 to recognise SHIFT, CONTROL and COMMODORE Key. Location 653 holds 1 for SHIFT, 2 for COMMODORE Key and 3 for CONTROL. You can checkif any of these keys have been presed using this program:

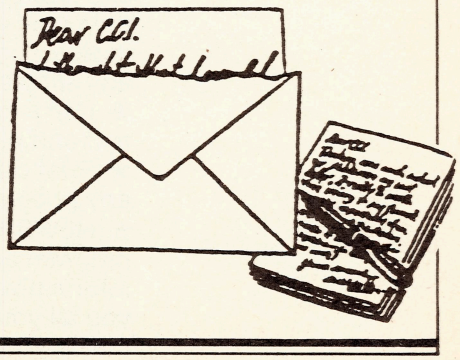
```
10 A=PEEK (653)
20 IF A=1 THEN PRINT "SHIFT"
30 IF A=2 THEN PRINT "COMMODORE KEY"
40 IF A=4 THEN PRINT "CONTROL"
50 GOTO 10
```

Also using POKE 808,234 disables run-stop, preventing users stopping your game. This also makes the listing unreadable. POKE 808,237 re-enables run-stop.

Yours sincerely,

Stephen Collie

Stephen gives more useful information for readers.



Extra! Extra!

CCI Special Offer!

Only £24.95 inc. p&p

SPRINGBOARD'S NEWSROOM!

This is a dynamic program designed to unleash creativity in journalists of all ages

With NEWSROOM you can use your computer to:

★ Design, produce and printout a newspaper for your family, class or business.

★ Select from over 600 pieces of art or design your own with powerful graphic tools.

★ Word process with five type styles and sizes, position your photos and then type will automatically arrange itself around pictures. It is easy to use and simple to correct.

★ Use a modem to send and receive text and pictures.

★ Print out your own newspaper on any popular printer.

★ NEWSROOM comes as a two disk program accompanied by an informative 85-page idea book to tell you all you need to know to begin to create your own newspaper.

Create your own newspaper with a really easy to use software package . . . that is one of the most exciting ideas anyone has made possible through the home computer.

You can now buy NEWSROOM, usually £29.95 through a special CCI Offer for only £24.95 including postage and packing — a saving of £5. NEWSROOM is on disk only for the 64/128.

To: Commodore Computing International
40 Bowling Green Lane, London EC1R 0NE

Please send me ☐ copies of NEWSROOM at the special price of £24.95

Please make cheques payable to Croftward Ltd. or debit my Access Card No.

☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐

Signature ..... Exp. date .....

Name .....

Address .....

.....

Please allow 28 days for delivery

EEC LTD.

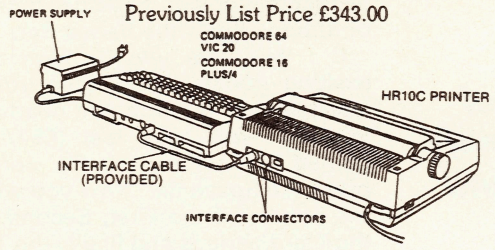
PRINTERS ½ PRICE FOR AMIGA & PC USERS

DEDICATED PRINTERS FOR COMMODORE USERS ★ BROTHER HR10C £120 INC VAT

Daisy wheel 80 col 12 CPS 2K Buffer, includes TRACTOR FEED - BOOKS IN ENGLISH, GERMAN & FRENCH - CENTRONICS & SERIAL VERSIONS also available.

IDEAL FOR WORD PROCESSING

Previously List Price £343.00



★ CBM DPS 1101 ★
Daisy wheel, 80 col. 17 c.p.s. Std. CBM Serial with connector.....£145.00
★ SEIKOSHA DOT MATRIX ★
GP 500 V.C. 50 c.p.s. Pin Feed with CBM serial connector for all Commodores (except Amiga).....£125.00
(SEND LARGE S.A.E. FOR INFO ON ABOVE & AMIGA SPECIALS)
★ SPECIAL OFFER COMMODORE 64 R.S.U. £22 inc. post ★
All prices inc. VAT. Add £6 postage for printers. Tel. orders. VISA & ACCESS or cash with order. Ansaphone orders ANYTIME. Please leave telephone number for acknowledgement.

Tel. 0753 888866. Fax: 0753 887149

18-21 Misbourne House, Chiltern Hill, Chalfont St Peter, Bucks, SL9 9UE
Tel: 0753 888866

VISA

UNBEATABLE COMMODORE HARDWARE OFFERS

AMIGA 500 XMAS PLUS PACK
Only £399 (Inc VAT)
With FREE TV Modulator, Mouse, Mouse Matt, 12 Top Quality Games, Two Utility disks containing the latest Virus Killers, Copiers, Disk Doctor and much more! Deluxe Paint 1, Amiga Tutorial, Workbench V1.3, and AMigaBASIC disks + 2 Manuals

AMIGA 500 XMAS PACK
Only £384 (Inc VAT)
With FREE TV Modulator, Mouse, Mouse Matt, 6 Top Quality Games, Deluxe Paint 1, Amiga Tutorial, Workbench V1.3, AmigaBASIC disks, + 2 Manuals

AMIGA 500 ECONOMY PACK
Only £365 (Inc. VAT)
With FREE TV Modulator, Mouse, Mouse Matt, Deluxe Paint 1, Amiga Tutorial, Workbench, V1.3, AmigaBASIC disks, + 2 Manuals

AMIGA 500 + 1084 STEREO MONITOR AND XMAS PACK
Only £599 (Inc. VAT)

COMMODORE PC-1
£299 + VAT
With FREE Mono Monitor, Able One — integrated Spreadsheet, Database and Word Processor, 10 Blank Commodore Disks, Lockable Disk Box (50 Capacity), GW-BASIC Quick Ref. Guide GW-BASIC & MSDDS V2.3.

Should your Amiga 500 or PC-1 go wrong within 25 days of purchase then we will replace it with a NEW computer.
All Hardware items have a 1 Year Warranty form the Purchase Date.
All Hardware is fully tested before dispatch.
16-Bit Software reserves the right to exchange Deluxe Paint 1 with Photon Paint (or vice-versa).

All Hardware Will Only Be Sent By Courier — Next Day £8 per item (Monday to Friday/Saturday is Extra). Two Days £6 per item

VISA

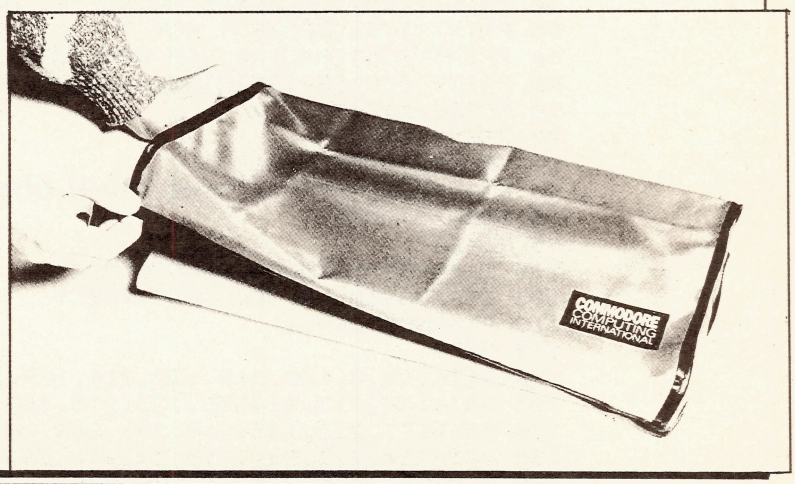
ACCESS/MASTERCARD/VISA CARD ORDERS/ENQUIRIES TEL 0706 43519
Send Cheque/Credit Card Details to: 16-Bit Software (Dept CID), 24 Bankfield Lane, Norden, Rochdale, Lancashire OL11 5RJ

COVER UP!

Only £3.99 for the C64, C16, Plus/4, C128 and 64C (all + 75p P+P)

A cover for your Commodore computer will protect it from dirt and damage.

CCI is making a special offer of strong, goodlooking covers to fit Commodore computers : C64, C16, Plus/4 and C128. The covers are designed in a cool grey with a neat yellow on black logo. They are of the highest quality and manufactured in smooth plastic to first class standards. CCI covers... Protect your Commodore computer with a touch of style.



Please send me .... covers for my
C64 ☐ C16 ☐ Plus/4 ☐ C128 ☐ 64C ☐
I enclose cheque/P.O. payable to Croftward Ltd for £.....
Please charge my
Access Acc No ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐
Name .....
Address .....
.....
Postcode .....
Send to: CCI Cover Offer 010
Commodore Computing International
40 Bowling Green Lane
London EC1R ONE
Allow 28 days for delivery

Ice Hockey

For the Plus/4

This should be of interest to anyone writing programs. The Input statement has all sorts of problems. This routine will enable you to specify where the input will be, and also what type and length of input to accept.

Christopher Doig

HOW TO PLAY:

Load and Run the first program (PART 1). Once READY. appears type SYS32768 as explained in the program.

The screen should now look as if it has just been switched on except the border, background and cursor colours are the same as in the program. Now Load and Run Part 2.

TYPE IN MANAGERS NAME: You have up to 14 characters to type in the name of your choice.

Pressing SPACE TO CONTINUE will set the scroll running. Hear you will see a list of options. Choose one by holding down the key (1-9) corresponding with the option you have chosen.

If you choose option 9 you have up to 8 characters for a new name.

Now into the main loop of the program.

* : Will allow you to enter in 14 characters for a new name. Once the name is entered the program will jump to option B to display the new name. SPACE will return you to the list of options.

A : Will display all the teams in a list. The team with the highest score being at the top of the list and the team with the lowest being at the bottom. PRESS THE SPACE BAR TO RETURN TO THE LIST OF OPTIONS.

B : Will display the : Managers name, The money you have in your account, A bank loan if you have one, How many matches you have played in and finally The Team Morale (87% being the highest). To return to the list of options Press the Space Bar.

C : Will take you through to an exciting match. The screen you are faced with at the moment nearly tells you that you have lost (£847) and gained (£---(whatever). To continue press the Space Bar. Now you will see the results of the First, Second, then the Third periods and finally the Totals of all three periods put together. Press the Space Bar.

You will now be back to the list of options. You will repeat option C until you run out of matches.

Straight after the totals of the final match the computer will take some time to search through the scores to find the highest. Once the winning team has been displayed Press Return.

The program will now run again and if everything went correctly the previous time you played you will have the same amount of money in your account.

NOTE: ICE HOCKEY will not run on the COMMODORE 16.

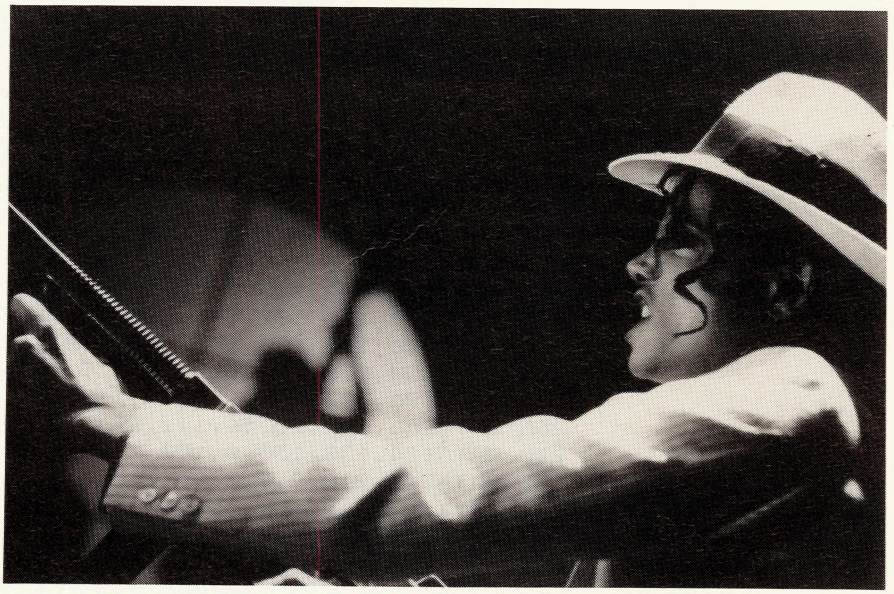
I advise the programs to be saved and verified before they are run.

```
2 FORT=1TO537:READA:TL=TL+A:NEXTT
3 IFTL<>63682THENPRINT"****[CTLB]DATA ERROR[CTLO]****":END
5 COLOR4,1:COLOR0,2,0:RESTORE120
10 PRINT"[CYN][CLR][CD3][SP4]THIS IS PART 1 OF ICE HOCKEY."
15 PRINT"[CD][SP3]ALL THAT THIS PART CONTAINS IS"
20 PRINT"[CD][SP3]THE MACHINE CODE NEEDED FOR PART"
25 PRINT"[CD][SP4]TWO - THE MAIN PART OBVIOUSLY."
30 PRINT"[CD][CTLB][DGRY][SP9]PRESS THE SPACE BAR."
35 IFPEEK(198)=60THEN40:ELSE35
40 PRINT"[CU][CYN][SP3]ONCE THIS PROGRAM HAS FINISHED"
45 PRINT"[CD][SP3]YOU MUST TYPE 'SYS32768'.THIS"
50 PRINT"[CD][SP2]WILL CLEAR THE MEMORY OF PROGRAM"
55 PRINT"[CD][SP2]BUT NOT THE ACCTUAL MACHINE CODE"
60 PRINT"[CD][SP3]AS YOU WILL SEE ONCE YOU HAVE"
65 PRINT"[CD][SP9]FINISHED BOTH PARTS.[DGRY]"
70 MCODE=14343
75 PRINTCHR$(8)
80 POKE52,59:POKE56,59
85 FORN=0TO30:READA:POKE1630+N,A:NEXT:SYS1630
90 FORN=1TO506
95 READA
100 IFA=999THENMCODE=14510:NEXT
105 IFA=888THENMCODE=14557:NEXT
110 POKEMCODE+N,A
115 NEXT
120 DATA160,0,132,212,132,214,169,208
125 DATA133,213,169,56,133,215,162,3
130 DATA177,212,145,214,200,208,249
135 DATA230,213,230,215,202,16,242,96
140 DATA24,24,52,68,76,146,226,0
145 DATA252,66,68,62,66,66,124,0
150 DATA62,70,194,192,192,224,126,0
```

continued on page 114

MOONWALKER

Andrew Demetriou strolls over a loony Jacksonian landscape



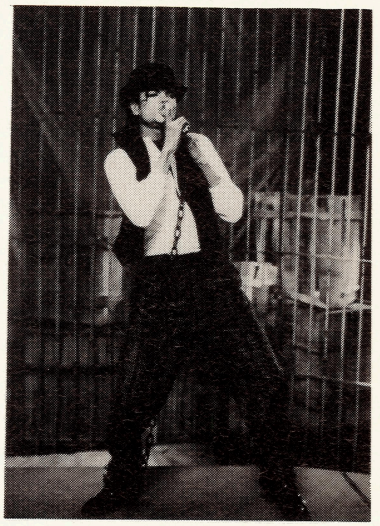
'Moonwalker' is quite literally a portrait of Michael Jackson. The entire epic characterises his inner-self from a number of angles, exploring Michael's emotions, affections, sensitivities, fantasies, his creativity and most notably his ego. However, conceited or not 'Moonwalker' contains some of the most stunning effects and sensational song and dance numbers ever put on film.

The movie begins on a retrospective theme. It is a brief summary of Jackson's accomplishments within the pop industry, 24 years of hits. We are taken through "The Jackson 5" to "Thriller" and "Bad" each step a new achievement and contribution. Its aim is to provoke our appreciation of the Michael Jackson concept and reinforces this affront by thousands of screaming fans (not only on film but within the cinema!). So that even if you are not an ardent Jackson fan you must acknowledge his level of public acceptance and talent.

Following this is the segment which everybody will be talking about. The re-shoot of the "Bad" video was absolutely brilliant; re-doing the entire piece with eight to ten-year-old children. The whole cast of the original cleverly matched member for member!

Michael is replaced by Brandon Adams who at barely nine year old produces remarkable dance sequences and with the help of sound effects, the parody of Jackson is hilarious!

The plot progresses to boost Jackson's popularity within the media, developing an image of Michael as a 'superbeing'. This, however, leads quite appropriately into "Smooth Criminal", starring Michael Jackson as the would-be super alien hero to save the children of the world form the influences of evil. Pretty dull stuff as far as the plot is concerned and Jackson's acting wasn't too convincing either. Never the less, the dance sequence in "Smooth Criminal" was superb and the special effects are an experience. Written by Jackson himself it says, a lot about the man, his fantasies and the image he wants to portray; innocence, youth, morals, vitality and of course, his talent.



People have strong reactions to Michael Jackson and the film will probably only serve to reinforce their views. If you are a fan you will be stunned and delighted, if you believe him to be egocentric, wildly foolish and overhyped you will find it will strengthen your prejudice. Either way it is guaranteed to be a smash to line up early and don't be surprised while watching the film to find the young girl sitting next to you is jittering with excitement and the older woman in front has fainted! A.D.

continued from page 114

```
155 DATA252,66,66,66,68,100,88,0
160 DATA252,70,64,112,64,70,124,0
165 DATA254,166,114,120,96,96,112,0
170 DATA62,66,192,192,198,194,126,0
175 DATA204,196,76,188,200,204,206,0
180 DATA120,48,56,56,24,56,44,0
185 DATA14,2,2,2,2,68,120,0
190 DATA198,76,88,112,72,92,206,0
195 DATA224,96,64,96,96,66,254,0
200 DATA198,170,146,146,130,130,130,0
205 DATA198,226,114,186,156,142,198,0
210 DATA56,68,130,130,130,130,124,0
215 DATA92,194,194,196,216,192,64,0
220 DATA124,130,130,130,138,134,126,0
225 DATA92,194,194,196,216,236,130,0
230 DATA62,66,152,100,2,132,248,0
235 DATA222,146,16,16,16,24,28,0
240 DATA140,132,132,132,132,140,118,0
245 DATA134,130,130,130,130,68,56,0
250 DATA130,130,130,146,146,170,198,0
255 DATA198,238,124,56,124,238,198,0
260 DATA194,70,68,40,16,48,112,0
265 DATA246,142,28,56,112,224,222,0,999
270 DATA124,130,130,0,130,130,124,0
275 DATA2,2,2,0,2,2,2,0
280 DATA124,2,2,124,128,128,124,0
285 DATA124,2,2,124,2,2,124,0
290 DATA130,130,130,124,2,2,2,0
295 DATA124,128,128,124,2,2,124,0
300 DATA124,128,128,124,130,130,124,0
305 DATA124,2,2,0,2,2,2,0
310 DATA124,130,130,124,130,130,124,0
315 DATA124,130,130,124,2,2,124,0,888
320 DATA255,255,255,255,255,255,255,255
325 DATA85,170,85,170,85,170,85,170
330 DATA85,171,87,175,95,191,127,255
335 DATA170,85,171,87,15,15,15,15
340 DATA170,85,170,85,0,0,0,0
345 DATA170,85,170,85,160,80,160,80
350 DATA160,80,160,80,160,80,160,80
355 DATA15,15,15,15,255,255,255,255
360 DATA160,80,160,80,175,95,191,127
365 DATA0,0,255,0,0,255,0,0
370 DATA0,0,1,1,1,1,0,0
375 DATA0,0,128,128,128,128,0,0
380 DATA31,63,52,50,63,63,48,31
385 DATA128,192,192,192,192,192,192,128
390 DATA15,48,127,255,239,239,239,239
395 DATA0,192,224,240,112,112,112,112
400 DATA0,0,255,255,255,255,0,0
405 DATA255,255,255,255,0,0,0,0
410 DATA255,254,253,250,0,0,0,0
415 DATA15,31,51,109,109,243,255,255
420 DATA192,248,252,254,255,255,255,254
425 DATA255,227,227,99,127,127,63,47
430 DATA128,64,32,255,145,209,206,128
435 DATA3,31,63,127,255,255,255,127
440 DATA240,248,204,182,182,207,255,255
445 DATA1,2,4,255,137,139,115,1
450 DATA255,199,199,198,254,254,252,244
```

Part Two:

```
5 PRINTCHR$(8)
10 POKE65298,192:POKE65299,(PEEK(65299)AND3)OR56
15 COLOR4,1:COLOR0,2,0:ACC=2000:AP=1:LOAN=0
20 INPUT"[LGRY][CLR][CD12]TYPE IN MANAGERS NAME";MGR$
25 MGR$=LEFT$(MGR$,14)
30 COLOR1,2,3
35 PRINT"[CLR]━━━
```

```
40 FORN=1TO23
45 PRINT"─────────────────────────────────────────────────────────────"
50 NEXTN
55 COLOR1,2,5
60 PRINT"[HOM][CD][CR5]♠♠♠
```

continued from page 115

```
390 TEAMS$(3)="[RED]GLASGOW EAGLES[SP5]"
395 TEAMS$(4)="[CYN]DUNDEE TANKERS[SP5]"
400 TEAMS$(5)="[PUR]CLEVELAND BOMBERS[SP2]"
405 TEAMS$(6)="[ORNG]NOTTINGHAM PANTHERS"
410 TEAMS$(7)="[DGRY]DURHAM WASPS[SP7]"
415 TEAMS$(8)="[LGRY]WHITLY WARRIORS[SP4]"
420 IFTEAM=9THENTEAMS$(9)="[YEL]"+P$+"[SP11]"
425 PRINT"[HOM2][CD]"
430 FORT=1TO15:PRINT"[CR6][SP28]":NEXTT
435 PRINT"[WHT][HOM][CD20][CR2]"P$
440 PRINT"[RED][HOM][CD3][CR10]▼▌[SP16][BLU]●☆"
445 PRINT"[RED][CR10]▗▚[SP16][BLU]▐▘"
450 PRINT"[CD][CYN][CR11]* - NEW MANAGEMENT"
455 PRINT"[CD][CR11]A - TABLE"
460 PRINT"[CD][CR11]B - INFORMATION"
465 PRINT"[CD][CR11]C - CONTINUE"
470 IFPEEK(198)=60THEN425
475 IFPEEK(198)=49THEN845
480 IFPEEK(198)=10THEN510
485 IFPEEK(198)=28THEN555
490 IFPEEK(198)=20THEN610
495 IFACC<847THEN870
500 IFLOAN=1ANDACC>5000THENLN=LN-1:ACC=ACC-1:IFLN=0THENLOAN=0
505 GOTO470
510 PRINT"[HOM][CD4]"
515 FORT=1TO11:PRINT"[CR6][SP28]":NEXTT
520 PRINT"[HOM][CD5][CR16] TABLE"
525 PRINT"[CR16]▝▀▀▀▀▘[LRED]"
530 BRD=0:FORT=SCBRDTO0STEP-1:FORN=1TOTEAM
535 IFT=P(N)THENPRINT"[CR8]"TEAMS$(N)"[SP2]"P(N):BRD=BRD+1
540 IFBRD=9THEN550
545 NEXTN,T
550 GOTO470
555 PRINT"[HOM][CD4]":FORT=1TO12:PRINT"[CR6][SP28]":NEXTT
560 PRINT"[HOM][CD5][CR14]INFORMATION"
565 PRINT"[CR13]▝▀▀▀▀▀▀▀▀▀▀▘"
570 PRINT"[CD][CR8]MANAGER : "MGR$
575 IFLOAN=1THENPRINT"[CD][CR8]BANK LOAN: "LN
580 IFLOAN=1THENPRINT"[CU][CR19]£"
585 PRINT"[CD][CR8]ACCOUNT : "ACC
590 PRINT"[CU][CR18]£"
595 PRINT"[CD][CR8]MATCHES :"MA
600 PRINT"[CD][CR8]TEAM MORALE :";:TM=INT(RND(1)*10):PRINTINT(TM*9.7)"[CL]%"
605 GOTO470
610 PRINT"[HOM][CD4]":FORT=1TO12:PRINT"[CR6][SP28]":NEXTT
615 PRINT"[HOM][CD5][CR13]FINANTIAL SIDE"
620 PRINT"[CR12]▝▀▀▀▀▀▀▀▀▀▀▀▀▀▘"
625 PRINT"[CD][CR7]THE RINKS OVERHEADS AMOUNTS"
630 PRINT"[CD][CR7]TO A GRAND TOTAL OF £847."
635 PRINT"[CD][CR7]WHICH WILL BE REDUCED FROM"
640 PRINT"[CD][CR7]YOUR PRESENT ACCOUNT."
645 PRINT"[CD][CR7][SP7]INCOME : ";:IN=INT(RND(1)*2000)+100:PRINTIN:ACC=(ACC-847
)+IN
650 PRINT"[CU][CR23]£"
655 IFPEEK(198)=60THENGOSUB345:ELSE655
660 PRINT"[HOM][CD4]":FORT=1TO12:PRINT"[CR6][SP28]":NEXTT
665 PRINT"[ORNG][HOM][CD6][CR7]▗▄▄▄▄▄▄▄▄▄▄▄▄▄▄▄▄▄▄▄▄▄▄▄▖"
670 PRINT"[CYN][CR7]▞▚▞▚▞▚▞▚▞▚▞▚▞▚▞▚▞▚▞▚▞▚▞▚▞▚▞▚"
675 PRINT"[ORNG][CR7]▚▗▚▗▚▗▚▗▚▗▚▗▚▗▚▗▚▗▚▗▚▗▚▗▚▗▚▗▚"
680 PRINT"[CYN][CR7]▛▞▚▞▚▞▚▞▚▞▚▞▚▞▚▞▚▞▚▞▚▞▚▞▚▞▚▞▜"
685 PRINT"[RED][CR7]▀▀▀▀▀▀▀▀▀▀▀▀▀
```

```
735 IFPEEK(198)=60THEN740:ELSE735
740 FORT=1TOTEAM
745 IFT=VTHENP(T)=P(T)+TB
750 IFT=ZTHENP(T)=P(T)+TP
755 IFT<>ZANDT<>VTHENP(T)=P(T)+INT(RND(1)*9)
760 NEXTT:TP=0:TB=0:AP=1:MA=MA+1:SCBRD=SCBRD+10
765 IFMA=20THEN775
770 GOTO425
775 PRINT"[HOM][CD4]":FORT=1TO12:PRINT"[CR6][SP28]":NEXTT
780 PRINT"[HOM][CD8][CR11]WHO WON THE ANNUAL"
785 PRINT"[CD][CR16]TROPHY?"
790 PRINT"[DGRY][CD][CR12]WAIT TO FIND OUT"
795 FORT=200TO0STEP-1:FORN=1TOTEAM
800 IFP(N)=TTHENWIN$=TEAM$(N):GOTO810
805 NEXTN,T
810 PRINT"[HOM][CD4]":FORT=1TO12:PRINT"[CR6][SP28]":NEXTT
815 PRINT"[HOM][CD6][CR12][CTLB]"WIN$
820 PRINT"[CD][CYN][CR10]WON THE ANNUAL TROPHY"
825 IFTEAM$(Z)=WIN$THENPRINT"[CD5][CR15][CTLB]YOUR TEAM!"
830 FORT=1TO5000:NEXTT
835 FORY=1TOTEAM:P(Y)=0:NEXTY
840 PRINT"[HOM][CD2]":FORT=1TO14:PRINT"[CR6][SP28]":NEXTT:GOTO190
845 PRINT"[HOM][CD20][CR13]"+CHR$(27)+CHR$(84)
850 PRINT"[CD][CR24]"+CHR$(27)+CHR$(66)
855 PRINT"ENTER THE NEW NAME:"
860 INPUTMGR$:MGR$=LEFT$(MGR$,14)
865 PRINT"[CD3][HOM2]":GOTO555
870 PRINT"[HOM][CD2]":FORT=1TO14:PRINT"[CR6][SP28]":NEXTT
875 IFLOAN=1THEN925
880 PRINT"[HOM][CD3][CR8]IT SEEMS YOU PUSHED YOUR"
885 PRINT"[CD][CR8]LUCK TOO FAR AND RAN OUT"
890 PRINT"[CD][CR8]OF MONEY.THEREFORE YOU"
895 PRINT"[CD][CR8]WILL HAVE TO TAKE OUT"
900 PRINT"[CD][CR8]A LOAN OF £5000 AND PAY"
905 PRINT"[CD][CR8]IT OFF WHEN YOU CAN."
910 PRINT"[CTLB][CD][CR12][WHT]PRESS SPACE BAR"
915 IFPEEK(198)=60THEN920:ELSE915
920 LOAN=1:LN=5000:ACC=ACC+5000:GOTO425
925 PRINT"[HOM][DGRY][CD3][CR12]YOU'VE BLOWN IT!"
930 PRINT"[CD][CR7]YOU HAVEN'T ENOUGH MONEY"
935 PRINT"[CD][CR7]TO CONTINUE WITH.YOU ARE"
940 PRINT"[CD][CR7]ADVISED TO MOVE ON AND"
945 PRINT"[CD][CR7]TRY YOUR LUCK WITH A"
950 PRINT"[CD][CR7]DIFFERENT TEAM."
955 PRINT"[CD][CR8][BLU][CTLB]PRESS RETURN TO RESTART"
960 IFPEEK(198)=1THENCLR:RUN:ELSE960
```

★ Program Submission Procedure ★

DO NOT submit any program or routine that you do not either own or have property authority to do so.

ALWAYS include your name, address and the date on all material and any enclosures.

Do not forget to make it clear exactly which computer/s your program or article is applicable to.

Include ROM or DOS versions wherever they are pertinent.

If you have to submit work which is hand-written then you must make sure it is printed clearly.

Number all pages.

Never use staples. Use paperclips if necessary.
If you are saving your program to tape then save it AT LEAST twice on each side.
When you save a program on disk save it twice and call the second file "BACKUP".

Remember to label all tapes and disks with your name and the title of the program. Label tape or disk with your name and the name or title of the program.

Always ensure that disks are well packaged. They should ideally be sent in a commercial disk mailer or at least packed between two pieces of hardboard or rigid plastic.

Please allow at least 8 weeks for acknowledgement as all programs have to be thoroughly tested and made into a suitable format.

Enclose a self-addressed stamped envelope or package if you would like your program to be returned.

★ Programming tips ★

If you can, use CHR$(x) type commands instead of those hard to read graphic symbols.
If necessary renumber your program on completion a many readers use auto number utilities to ease typing in.

Try to keep instructions within the program itself at a sensible level. You can expand on them within the accompany text if necessary.

TEST your programs before submitting them or even better get a friend to test them for you.

If a program contains machine code data please use decimal and not hex as there are fewer digits to be confused. Try and keep the same number of data statements in each line. Please add some form of error checking if your program contains more than five lines of data.

Blackjack

by Mark Manning Part Two: From CCI DEC

```
1370 DATA 18,18,1C,0F,07,00,00,00,18,18,38,F0,E0,00,00,00, EF
1380 DATA C0,C0,C0,C0,C0,C0,FF,FF,C0,E0,70,38,1C,0E,07,03, E9
1390 DATA 03,07,0E,1C,38,70,E0,C0,FF,FF,C0,C0,C0,C0,C0,C0, E3
1400 DATA FF,FF,03,03,03,03,03,03,00,3C,7E,7E,7E,7E,3C,00, 63
1410 DATA 00,00,00,00,00,FF,FF,00,36,7F,7F,7F,3E,1C,08,00, 76
1420 DATA 60,60,60,60,60,60,60,60,00,00,00,07,0F,1C,18,18, D8
1430 DATA C3,E7,7E,3C,3C,7E,E7,C3,00,3C,7E,66,66,7E,3C,00, E0
1440 DATA 18,18,66,66,18,18,3C,00,06,06,06,06,06,06,06,06, 78
1450 DATA 08,1C,3E,7F,3E,1C,08,00,18,18,18,FF,FF,18,18,18, 49
1460 DATA C0,C0,30,30,C0,C0,30,30,18,18,18,18,18,18,18,18, C9
1470 DATA 00,00,03,3E,76,36,36,00,FF,7F,3F,1F,0F,07,03,01, E2
1480 DATA 00,00,00,00,00,00,00,00,F0,F0,F0,F0,F0,F0,F0,F0, 62
1490 DATA 00,00,00,00,FF,FF,FF,FF,FF,00,00,00,00,00,00,00, 5D
1500 DATA 00,00,00,00,00,00,00,FF,C0,C0,C0,C0,C0,C0,C0,C0, 5C
1510 DATA CC,CC,33,33,CC,CC,33,33,03,03,03,03,03,03,03,03, 70
1520 DATA 00,00,00,00,CC,CC,33,33,FF,FE,FC,F8,F0,E0,C0,80, 6F
1530 DATA 03,03,03,03,03,03,03,03,18,18,18,1F,1F,18,18,18, 55
1540 DATA 00,00,00,00,0F,0F,0F,0F,18,18,18,1F,1F,00,00,00, 17
1550 DATA 00,00,00,F8,F8,18,18,18,00,00,00,00,00,00,FF,FF, 4D
1560 DATA 00,00,00,1F,1F,18,18,18,18,18,18,FF,FF,00,00,00, 19
1570 DATA 00,00,00,FF,FF,18,18,18,18,18,18,F8,F8,18,18,18, DF
1580 DATA C0,C0,C0,C0,C0,C0,C0,C0,E0,E0,E0,E0,E0,E0,E0,E0, DF
1590 DATA 07,07,07,07,07,07,07,07,FF,FF,00,00,00,00,00,00, 15
1600 DATA FF,FF,FF,00,00,00,00,00,00,00,00,00,00,FF,FF,FF, 0F
1610 DATA 03,03,03,03,03,03,FF,FF,00,00,00,00,F0,F0,F0,F0, DF
1620 DATA 0F,0F,0F,0F,00,00,00,00,18,18,18,F8,F8,00,00,00, 53
1630 DATA F0,F0,F0,F0,00,00,00,00,F0,F0,F0,F0,0F,0F,0F,0F, 0F
1640 DATA 01,01,07,01,07,0D,19,19,80,80,E0,80,E0,B0,98,98, 7F
1650 DATA 19,0D,07,01,07,0D,19,19,98,B0,E0,80,E0,B0,98,98, 5B
1660 DATA 00,00,00,03,07,0D,19,19,00,00,00,C0,E0,B0,98,98, 24
1670 DATA 19,19,0D,07,01,07,01,01,98,98,B0,E0,80,E0,80,80, 94
1680 DATA 19,19,0D,07,01,07,0D,19,98,98,B0,E0,80,E0,B0,98, 70
1690 DATA 19,19,0D,07,03,00,00,00,98,98,B0,E0,C0,00,00,00, 39
1700 DATA 1F,0D,0C,06,07,1B,3D,3E,F8,B0,30,60,E0,D8,BC,7C, 3C
1710 DATA 3E,3D,1B,07,06,0C,0D,1F,7C,BC,D8,E0,60,30,B0,F8, 3F
1720 DATA 00,00,00,00,03,0F,1F,3F,3F,1F,0F,03,C0,F0,F8,FC, C3
1730 DATA FC,F8,F0,C0,00,00,00,00,00,7E,18,18,18,1C,18,18, 79
1740 DATA 00,7E,06,0C,30,60,66,3C,00,3C,66,60,38,60,66,3C, 77
1750 DATA 00,60,60,FE,66,78,70,60,00,3C,66,60,60,3E,06,7E, 07
1760 DATA 00,3C,66,66,3E,06,66,3C,00,18,18,18,18,30,66,7E, 69
1770 DATA 00,3C,66,66,3C,66,66,3C,00,3C,66,60,7C,66,66,3C, 3B
1780 DATA 00,1C,36,30,30,30,30,78,00,66,36,1E,0E,1E,36,66, 47
1790 DATA 00,70,3C,66,66,66,66,3C,00,18,18,18,18,18,18,7E, D5
1800 DATA 00,7C,38,FE,FE,7C,38,10,00,10,38,7C,FE,FE,FE,6C, 73
1810 DATA 00,3C,18,18,66,66,18,18,00,10,38,7C,FE,7C,38,10, 61
1820 DATA 00,66,66,66,7E,66,3C,18,FB,C3,C3,FB,1B,1B,FB,00, 78
1830 DATA F7,36,36,37,36,36,F6,00,EF,03,03,C3,03,03,03,00, 35
1840 DATA C0,00,00,00,00,00,00,00,CD,CD,CD,FD,CD,CD,CD,00, C0
1850 DATA FB,9B,9B,FB,9B,9B,9B,00,E3,1B,1B,1B,E3,33,1B,00, 22
1860 DATA E0,30,30,30,30,30,E0,00,FF,FF,FF,81,FF,FF,FF,FF, 4C
1870 DATA FF,FF,FF,FF,FF,E7,E7,FF,FF,FC,F9,F3,E7,CF,9F,FF, 4F
1880 DATA C3,99,91,89,99,99,C3,FF,E7,E7,C7,E7,E7,E7,81,FF, 83
1890 DATA C3,99,F9,F3,CF,9F,81,FF,C3,99,F9,E3,F9,99,C3,FF, 45
1900 DATA F9,F1,E1,99,80,F9,F9,FF,81,9F,83,F9,F9,99,C3,FF, 0A
1910 DATA C3,99,9F,83,99,99,C3,FF,81,99,F3,E7,E7,E7,E7,FF, 24
1920 DATA C3,99,99,C3,99,99,C3,FF,C3,99,99,C1,F9,99,C3,FF, DA
1930 DATA FF,FF,E7,FF,FF,E7,FF,FF,FF,FF,E7,FF,FF,E7,E7,CF, 22
1940 DATA F1,E7,CF,9F,CF,E7,F1,FF,FF,FF,81,FF,81,FF,FF,FF, 0A
1950 DATA 8F,E7,F3,F9,F3,E7,8F,FF,C3,99,F9,F3,E7,FF,E7,FF, E8
```

```
1960 DATA FF,FF,FF,00,00,FF,FF,FF,F7,E3,C1,80,80,E3,C1,FF, 20
1970 DATA E7,E7,E7,E7,E7,E7,E7,E7,FF,FF,FF,00,00,FF,FF,FF, 52
1980 DATA FF,FF,00,00,FF,FF,FF,FF,FF,00,00,FF,FF,FF,FF,FF, 46
1990 DATA FF,FF,FF,FF,00,00,FF,FF,CF,CF,CF,CF,CF,CF,CF,CF, B8
2000 DATA F3,F3,F3,F3,F3,F3,F3,F3,FF,FF,FF,1F,0F,C7,E7,E7, 10
2010 DATA E7,E7,E3,F0,F8,FF,FF,FF,E7,E7,C7,0F,1F,FF,FF,FF, 66
2020 DATA 3F,3F,3F,3F,3F,3F,00,00,3F,1F,8F,C7,E3,F1,F8,FC, 5C
2030 DATA FC,F8,F1,E3,C7,8F,1F,3F,00,00,3F,3F,3F,3F,3F,3F, 52
2040 DATA 00,00,FC,FC,FC,FC,FC,FC,FF,C3,81,81,81,81,C3,FF, C2
2050 DATA FF,FF,FF,FF,FF,00,00,FF,C9,80,80,80,C1,E3,F7,FF, 9F
2060 DATA 9F,9F,9F,9F,9F,9F,9F,9F,FF,FF,FF,F8,F0,E3,E7,E7, 2D
2070 DATA 3C,18,81,C3,C3,81,18,3C,FF,C3,81,99,99,81,C3,FF, 15
2080 DATA E7,E7,99,99,E7,E7,C3,FF,F9,F9,F9,F9,F9,F9,F9,F9, 6D
2090 DATA F7,E3,C1,80,C1,E3,F7,FF,E7,E7,E7,00,00,E7,E7,E7, 8C
2100 DATA 3F,3F,CF,CF,3F,3F,CF,CF,E7,E7,E7,E7,E7,E7,E7,E7, FC
2110 DATA FF,FF,FC,C1,89,C9,C9,FF,00,80,C0,E0,F0,F8,FC,FE, D3
2120 DATA FF,FF,FF,FF,FF,FF,FF,FF,0F,0F,0F,0F,0F,0F,0F,0F, 43
2130 DATA FF,FF,FF,FF,00,00,00,00,00,FF,FF,FF,FF,FF,FF,FF, 38
2140 DATA FF,FF,FF,FF,FF,FF,FF,00,3F,3F,3F,3F,3F,3F,3F,3F, 29
2150 DATA 33,33,CC,CC,33,33,CC,CC,FC,FC,FC,FC,FC,FC,FC,FC, 05
2160 DATA FF,FF,FF,FF,33,33,CC,CC,00,01,03,07,0F,1F,3F,7F, F6
2170 DATA FC,FC,FC,FC,FC,FC,FC,FC,E7,E7,E7,E0,E0,E7,E7,E7, 00
2180 DATA FF,FF,FF,FF,F0,F0,F0,F0,E7,E7,E7,E0,E0,FF,FF,FF, 2E
2190 DATA FF,FF,FF,07,07,E7,E7,E7,FF,FF,FF,FF,FF,FF,00,00, E8
2200 DATA FF,FF,FF,E0,E0,E7,E7,E7,E7,E7,E7,00,00,FF,FF,FF, 0C
2210 DATA FF,FF,FF,00,00,E7,E7,E7,E7,E7,E7,07,07,E7,E7,E7, 36
2220 DATA 3F,3F,3F,3F,3F,3F,3F,3F,1F,1F,1F,1F,1F,1F,1F,1F, 26
2230 DATA F8,F8,F8,F8,F8,F8,F8,F8,00,00,FF,FF,FF,FF,FF,FF, E0
2240 DATA 00,00,00,FF,FF,FF,FF,FF,FF,FF,FF,FF,FF,00,00,00, D6
2250 DATA FC,FC,FC,FC,FC,FC,00,00,FF,FF,FF,FF,0F,0F,0F,0F, F6
2260 DATA F0,F0,F0,F0,FF,FF,FF,FF,E7,E7,E7,07,07,FF,FF,FF, 72
2270 DATA 0F,0F,0F,0F,FF,FF,FF,FF,0F,0F,0F,0F,F0,F0,F0,F0, A6
```

```
1 REM BJ.DAT.1
2 :
3 REM   GENERATED BY DATAGEN
4 REM
5 REM    COPYRIGHT (C) 1987
6 REM
7 REM   BY MARK I MANNING IV
8 :
9 :
10 M=32768:L=990:I=10:PRINTCHR$(147)
20 FORP=1TO257:L=L+I:FORN=0TO15
30 READA$:GOSUB100
40 POKEM+N,D:CK=CK+D
50 NEXT:READA$:GOSUB100
60 CK=CK-(INT(CK/256)*256):IFCK=DTHEN90
70 A$=CHR$(147)+"LIST"+STR$(L):PRINTA$
80 POKE631,19:POKE632,13:POKE198,2:END
90 PRINTL"[SP2]OK":M=M+16:NEXT:GOTO170
100 LB=ASC(RIGHT$(A$,1))-48
110 HB=ASC( LEFT$(A$,1))-48
120 IFLB>9THENLB=LB-7
130 IFHB>9THENHB=HB-7
140 D=HB*16+LB:RETURN
150 :
160 :
170 CLR:LOAD"BJ.DAT.2",8
```

continued on page 120

continued from page 119

```
180 :
190 :
1000 DATA 00,20,CD,BD,20,BD,7D,20,0B,7F,20,20,7F,20,23,7F, 2F
1010 DATA 4C,20,7F,C9,20,90,1B,C9,40,90,24,C9,60,90,19,C9, 06
1020 DATA 80,90,19,C9,A0,90,0B,C9,C0,90,0D,C9,FF,90,06,A9, 60
1030 DATA 5E,60,A9,20,60,29,7F,60,38,E9,40,60,38,E9,20,60, B1
1040 DATA A9,07,85,FC,A9,C0,85,FB,A0,27,B9,DA,80,91,FB,88, B9
1050 DATA 10,F8,AD,16,D0,48,29,F8,0D,02,81,AA,A9,05,48,A9, 96
1060 DATA F2,A0,00,CD,12,D0,D0,FB,8E,16,D0,8C,21,D0,A9,01, 3D
1070 DATA CD,12,D0,D0,FB,68,8D,21,D0,68,8D,16,D0,A9,01,8D, AF
1080 DATA 19,D0,AD,02,81,D0,05,20,95,80,A9,08,38,E9,02,8D, 33
1090 DATA 02,81,4C,31,EA,A0,00,B9,DB,80,99,DA,80,C8,C0,27, 73
1100 DATA D0,F5,AD,03,81,F0,04,CE,03,81,60,A0,00,AD,04,81, E1
1110 DATA 85,FD,AD,05,81,85,FE,B1,FD,20,13,80,8D,01,81,EE, 77
1120 DATA 04,81,D0,03,EE,05,81,AD,04,81,CD,9F,8F,D0,DB,AD, C8
1130 DATA 05,81,CD,A0,8F,D0,D3,4C,AB,71,1C,39,09,D0,50,52, 25
1140 DATA 49,4E,54,26,39,03,30,39,08,84,C0,18,16,E7,3A,39, AF
1150 DATA 03,44,39,20,D0,50,52,49,4E,D4,56,41,4C,55,C5,49, 72
1160 DATA CE,43,00,00,00,00,50,52,45,53,45,4E,54,49,4E,47, 82
1170 DATA 2E,2E,2E,2E,20,20,20,20,20,20,20,42,4C,41,43,4B, 77
1180 DATA 4A,41,43,4B,21,21,21,20,20,20,20,20,20,20,20,2D,2D, 2D
1190 DATA 43,41,53,49,4E,4F,20,52,55,4C,45,53,20,4F,2E,4B, 7D
1200 DATA 2E,2D,2D,20,20,20,20,20,41,52,46,2E,2E,2E,20,20, 48
1210 DATA 20,41,52,46,2E,2E,2E,20,20,20,20,20,20,20,20,20,4F, 1A
1220 DATA 52,2E,2E,2E,20,48,4F,57,20,54,4F,20,4C,4F,4F,53, 24
1230 DATA 45,20,41,4E,44,20,53,54,49,4C,4C,20,4B,45,45,50, 49
1240 DATA 20,41,4C,4C,20,59,4F,55,52,20,4D,4F,4E,45,59,21, 7A
1250 DATA 21,21,20,20,20,20,20,20,20,20,20,20,50,52,4F,47,52, 66
1260 DATA 41,4D,4D,45,44,20,42,59,20,20,2D,2D,4D,41,52,4B, 4A
1270 DATA 20,49,20,4D,41,4E,4E,49,4E,47,20,49,56,2D,2D,20, 14
1280 DATA 20,20,20,20,20,20,20,20,20,53,43,52,4F,4C,4C,20, 23
1290 DATA 52,4F,55,54,49,4E,45,20,41,44,41,50,54,45,44,20, 7C
1300 DATA 46,52,4F,4D,20,50,52,4F,47,52,41,4D,20,42,59,20, C3
1310 DATA 52,49,43,48,41,52,44,20,50,2E,20,46,52,41,4E,4B, F0
1320 DATA 4C,49,4E,20,20,20,28,50,55,42,4C,49,53,48,45,44, FB
1330 DATA 20,49,4E,20,43,43,49,20,4F,43,54,2E,20,31,39,38, 97
1340 DATA 37,29,20,20,20,20,20,20,20,20,20,20,20,43,41,52,44, 51
1350 DATA 20,43,4F,55,4E,54,49,4E,47,20,4D,45,54,48,4F,44, B9
1360 DATA 20,42,59,20,45,44,57,49,4E,20,53,49,4C,42,45,52, EC
1370 DATA 53,54,41,4E,47,20,20,20,20,20,20,20,20,20,20,49, F2
1380 DATA 4E,53,54,52,55,43,54,49,4F,4E,53,20,46,4F,4C,4C, AB
1390 DATA 4F,57,49,4E,47,20,2D,2D,3E,20,20,20,20,20,20,20, C7
1400 DATA 20,20,54,20,20,20,46,4F,52,20,41,4E,4F,54,48,45, 81
1410 DATA 52,20,43,41,52,44,20,20,20,20,20,20,20,20,20,20,20, 4D
1420 DATA 53,20,20,20,54,4F,20,53,54,41,4E,44,20,50,41,54, 42
1430 DATA 20,20,20,20,20,20,20,20,20,20,20,46,20,20,20,54,4F, CB
1440 DATA 20,46,4F,4C,44,20,48,41,4E,44,20,20,20,20,20,20, 0B
1450 DATA 20,20,20,20,58,20,20,20,54,4F,20,53,50,4C,49,54, 92
1460 DATA 20,20,28,55,50,20,54,4F,20,34,20,48,41,4E,44,53, 44
1470 DATA 21,21,21,29,20,20,20,20,20,20,20,20,20,20,20,44,20, 74
1480 DATA 20,20,54,4F,20,44,4F,55,42,4C,45,20,59,4F,55,52, A1
1490 DATA 20,42,45,54,20,20,20,20,20,20,20,20,20,20,20,20,43, 3F
1500 DATA 20,20,20,54,4F,20,56,49,45,57,20,43,55,52,52,45, 3E
1510 DATA 4E,54,20,3E,43,41,52,44,20,43,4F,55,4E,54,3C,20, 5D
1520 DATA 20,20,20,20,20,20,20,20,20,52,20,20,20,54,4F,20, F2
1530 DATA 52,45,53,54,53,52,54,20,47,41,4D,45,20,20,20,20, E3
1540 DATA 20,20,20,20,20,20,51,20,20,20,54,4F,20,51,55,49, 06
1550 DATA 54,20,47,41,4D,45,20,20,28,43,4F,57,41,52,44,21, DD
1560 DATA 21,21,29,20,20,20,20,20,20,20,20,20,20,20,50,4C,41, 65
```

```
1570 DATA 43,45,20,42,45,54,20,57,48,45,4E,20,41,53,4B,45, 7E
1580 DATA 44,20,20,28,42,45,46,4F,52,45,20,44,45,41,4C,29, 3C
1590 DATA 2E,2E,2E,20,20,20,20,20,20,20,41,20,42,45,54,20, 02
1600 DATA 4F,46,20,31,20,55,4E,49,54,20,3D,20,35,20,44,4F, AD
1610 DATA 4C,4C,41,52,53,20,41,4E,44,20,41,20,42,45,54,20, 9A
1620 DATA 4F,46,20,39,20,55,4E,49,54,53,20,3D,20,34,35,20, 41
1630 DATA 44,4F,4C,4C,41,52,53,20,20,20,20,20,20,20,20,20, 72
1640 DATA 20,59,4F,55,20,47,4F,20,42,55,53,54,20,41,54,20, 78
1650 DATA 32,32,20,4F,52,20,41,42,4F,56,45,20,20,20,20,20, CA
1660 DATA 20,20,20,20,20,59,4F,55,20,4D,41,59,20,53,50,4C, 7D
1670 DATA 49,54,20,49,46,20,59,4F,55,20,48,4F,4C,44,20,32, 7F
1680 DATA 20,41,4C,49,4B,45,20,43,41,52,44,53,20,20,20,20, 12
1690 DATA 20,20,20,20,20,20,44,4F,55,42,4C,49,4E,47,20,44, 8A
1700 DATA 4F,57,4E,20,44,4F,55,42,4C,45,53,20,59,4F,55,52, 1B
1710 DATA 20,42,45,54,20,28,4F,4E,4C,59,20,49,46,20,59,4F, 17
1720 DATA 55,20,48,4F,4C,44,20,32,20,43,41,52,44,53,20,57, 09
1730 DATA 49,54,48,20,41,20,54,4F,54,41,4C,20,4F,46,20,31, F9
1740 DATA 30,20,4F,52,20,31,31,29,20,20,20,20,20,20,20,20, 95
1750 DATA 20,20,59,4F,55,20,4D,41,59,20,49,4E,53,55,52,45, CF
1760 DATA 20,41,47,41,49,4E,53,54,20,54,48,45,20,50,4F,53, 09
1770 DATA 49,42,49,4C,49,54,59,20,4F,46,20,54,48,45,20,44, 39
1780 DATA 45,41,4C,45,52,20,48,41,56,49,4E,47,20,42,4C,41, 6E
1790 DATA 43,4B,4A,41,43,4B,2E,2E,2E,20,20,20,20,20,20,20, 7F
1800 DATA 20,20,20,49,4E,53,55,52,41,4E,43,45,20,3D,20,31, 35
1810 DATA 2F,32,20,54,48,45,20,42,45,54,20,41,4E,44,20,50, F5
1820 DATA 41,59,53,20,4F,46,46,20,41,54,20,32,20,54,4F,20, C7
1830 DATA 31,2E,2E,2E,20,20,20,20,20,20,20,20,20,20,20,49,46, 51
1840 DATA 20,54,48,45,20,44,45,41,4C,45,52,20,44,4F,45,53, 6A
1850 DATA 20,4E,4F,54,20,48,41,56,45,20,42,4C,41,43,4B,4A, 86
1860 DATA 41,43,4B,20,20,54,48,45,4E,20,28,49,46,20,59,4F, 63
1870 DATA 55,20,49,4E,53,55,52,45,44,29,20,59,4F,55,20,4C, A4
1880 DATA 4F,4F,53,45,20,54,48,45,20,49,4E,53,55,52,41,4E, 1B
1890 DATA 43,45,20,42,45,54,20,42,55,54,20,4E,4F,54,20,54, 2E
1900 DATA 48,45,20,48,41,4E,44,20,53,4F,20,50,4C,41,59,20, 2E
1910 DATA 43,4F,4E,54,49,4E,55,45,53,20,20,20,20,20,20,20, C6
1920 DATA 20,20,20,49,46,20,48,45,20,44,4F,45,53,20,48,41, 56
1930 DATA 56,45,20,42,4C,41,43,4B,4A,41,43,4B,20,54,48,45, 88
1940 DATA 4E,20,59,4F,55,20,4C,4F,4F,53,45,20,54,48,45,20, B6
1950 DATA 48,41,4E,44,20,42,55,54,20,57,49,4E,20,54,48,45, EB
1960 DATA 20,49,4E,53,55,52,41,4E,43,45,20,42,45,54,2E,2E, 0A
1970 DATA 2E,20,53,4F,20,59,4F,55,20,57,49,4E,20,32,20,2A, C1
1980 DATA 20,48,41,4C,46,20,59,4F,55,52,20,4C,4F,53,53,45, 11
1990 DATA 53,2E,2E,2E,20,4F,52,20,49,4E,20,4F,54,48,45,52, 08
2000 DATA 20,57,4F,52,44,53,20,59,4F,55,20,4C,4F,4F,53,45, 76
2010 DATA 20,4E,4F,54,48,49,4E,47,21,21,21,20,20,20,20,20, B0
2020 DATA 20,20,20,20,20,41,43,45,53,20,43,41,4E,20,43,4F, 10
2030 DATA 55,4E,54,20,41,53,20,31,20,28,48,41,52,44,29,20, BC
2040 DATA 4F,52,20,31,31,20,28,53,4F,46,54,29,2E,2E,2E,20, 36
2050 DATA 20,20,20,20,20,20,20,20,20,44,45,41,4C,45,52,20, 23
2060 DATA 4D,55,53,54,20,43,4F,55,4E,54,20,48,49,53,20,41, 7A
2070 DATA 43,45,53,20,41,53,20,53,4F,46,54,20,41,4E,44,20, 78
2080 DATA 43,41,4E,20,4E,4F,54,20,53,50,4C,49,54,2C,20,49, 9C
2090 DATA 4E,53,55,52,45,20,4F,52,20,44,4F,55,42,4C,45,20, E5
2100 DATA 44,4F,57,4E,2C,20,41,4E,44,20,48,45,20,4D,55,53, FE
2110 DATA 54,20,53,54,49,43,4B,20,41,54,20,31,37,20,4F,52, EE
2120 DATA 20,41,42,4F,56,45,21,20,20,20,20,20,20,20,20,20, BC
2130 DATA 20,54,48,45,20,43,4F,4D,50,55,54,45,52,20,57,49, 0C
2140 DATA 4C,4C,20,52,45,4D,49,4E,44,20,59,4F,55,20,4F,46, 55
2150 DATA 20,54,48,45,20,43,41,52,44,20,43,4F,55,4E,54,20, 59
```

cont. on next page

continued from page 120

```
2160 DATA 42,55,54,20,54,48,49,53,20,57,49,4C,4C,20,43,4F, A6
2170 DATA 53,54,20,59,4F,55,20,31,20,44,4F,4C,4C,41,52,20, B9
2180 DATA 20,20,20,20,20,20,20,20,20,20,48,45,4C,4C,4F,20,4D, BA
2190 DATA 55,4D,21,21,21,20,20,20,20,20,20,20,20,20,20,20,43, 42
2200 DATA 41,52,44,20,43,4F,55,4E,54,49,47,20,47,4F,45,53, A0
2210 DATA 20,41,53,20,46,4F,4C,4C,4F,57,53,20,2D,2D,3E,20, 72
2220 DATA 20,20,20,20,20,20,20,20,20,20,43,4F,55,4E,54,20,2B, 66
2230 DATA 31,20,46,4F,52,20,41,4C,4C,20,43,41,52,44,53,20, 44
2240 DATA 46,52,4F,4D,20,32,20,54,4F,20,37,20,20,20,20,20, 84
2250 DATA 20,20,20,20,20,43,4F,55,4E,54,20,2D,31,20,46,4F, E0
2260 DATA 52,20,41,4C,4C,20,43,41,52,44,53,20,46,52,4F,4D, 0C
2270 DATA 20,39,20,54,4F,20,41,43,45,20,20,20,20,20,20,20, F1
2280 DATA 20,20,20,38,20,43,4F,55,4E,54,53,20,41,53,20,30, 89
2290 DATA 20,28,4E,45,55,54,52,41,4C,29,20,20,20,20,20,20, D5
2300 DATA 20,20,20,54,48,45,20,44,45,43,4B,20,49,53,20,4E, 77
2310 DATA 45,55,54,52,41,4C,20,41,54,20,54,48,45,20,53,54, C1
2320 DATA 41,52,54,20,4F,46,20,50,4C,41,59,2E,2E,2E,20,20, 7D
2330 DATA 20,20,20,20,20,20,20,41,20,50,4F,53,49,54,49,56, EC
2340 DATA 45,20,44,45,43,4B,20,49,53,20,49,4E,20,59,4F,55, F8
2350 DATA 52,20,46,41,56,4F,55,52,20,20,20,20,20,20,20,20, 3D
2360 DATA 20,20,41,20,4E,45,47,41,54,49,56,45,20,44,45,43, 1D
2370 DATA 4B,20,49,53,20,49,4E,20,46,41,56,4F,55,52,20,4F, 3D
2380 DATA 46,20,54,48,45,20,44,45,41,4C,45,52,20,20,20,20, D1
2390 DATA 20,20,20,20,20,20,48,4F,57,20,54,4F,20,57,49,4E, 50
2400 DATA 20,2D,2D,3E,20,20,20,20,20,20,20,20,20,20,49,46, D7
2410 DATA 20,54,48,45,20,44,45,41,4C,45,52,53,20,55,50,20, DD
2420 DATA 43,41,52,44,20,49,53,20,41,20,32,20,4F,52,20,33, 7A
2430 DATA 2E,2E,2E,20,20,20,53,54,41,4E,44,20,41,54,20,31, E4
2440 DATA 33,20,4F,52,20,41,42,4F,56,45,20,20,20,20,20,20, 25
2450 DATA 20,20,20,20,49,46,20,49,54,20,49,53,20,41,20,34, 62
2460 DATA 2C,20,35,20,4F,52,20,36,20,54,48,45,4E,20,44,52, FF
2470 DATA 41,57,20,54,49,4C,4C,20,31,32,20,4F,52,20,41,42, D3
2480 DATA 4F,56,45,20,20,20,20,20,20,20,20,20,20,20,54,48,49, E2
2490 DATA 53,20,41,50,50,4C.49.45.53,20,55,4E,4C,45,53,53, 5D
2500 DATA 20,59,4F,55,52,20,54,4F,54,41,4C,20,49,53,20,53, 9F
2510 DATA 4F,46,54,2E,2E,2E,20,20,20,20,20,44,52,41,57,20, 00
2520 DATA 54,4F,20,41,4E,59,20,53,4F,46,54,20,48,41,4E,44, 42
2530 DATA 20,42,45,4C,4F,57,20,31,38,21,21,21,20,20,20,20, 47
2540 DATA 20,20,20,20,20,20,49,46,20,54,48,45,20,44,45,41, 81
2550 DATA 4C,45,52,20,53,48,4F,57,53,20,41,4E,59,20,43,41, C4
2560 DATA 52,44,20,46,52,4F,4D,20,37,20,54,4F,20,41,43,45, B1
2570 DATA 2C,20,44,52,41,57,20,54,49,4C,4C,20,59,4F,55,20, BD
2580 DATA 52,45,41,43,48,20,48,41,52,44,20,31,36,20,20,20, 46
2590 DATA 20,20,20,20,20,20,20,41,4C,57,41,59,53,20,44,4F, AA
2600 DATA 55,42,4C,45,20,44,4F,57,4E,20,4F,4E,20,31,31,20, 89
2610 DATA 28,4E,4F,20,4D,41,54,54,45,52,20,57,48,41,54,20, AF
2620 DATA 54,48,45,20,44,45,41,4C,45,52,20,53,48,4F,57,53, 11
2630 DATA 29,20,20,20,20,20,20,20,20,20,20,20,57,49,54,48,20, D6
2640 DATA 41,20,48,41,4E,44,20,4F,46,20,31,30,2C,20,44,4F, 67
2650 DATA 55,42,4C,45,20,44,4F,57,4E,20,55,4E,4C,45,53,53, E1
2660 DATA 20,54,48,45,20,44,45,41,4C,45,52,53,20,55,50,43, 0A
2670 DATA 41,52,44,20,49,53,20,41,4E,20,41,43,45,20,4F,52, F6
2680 DATA 20,31,30,20,28,54,45,4E,20,4D,45,41,4E,53,20,54, AE
2690 DATA 2C,20,4A,2C,20,51,2C,20,4B,29,20,20,20,20,20,20, 61
2700 DATA 20,20,20,20,44,4F,20,4E,4F,54,20,53,50,4C,49,54, 31
2710 DATA 20,31,30,27,53,2E,2E,2E,20,20,28,42,45,43,41,55, 7E
2720 DATA 53,45,20,59,4F,55,52,20,54,4F,54,41,4C,20,49,53, E5
2730 DATA 20,32,30,21,21,21,29,20,20,20,20,20,20,20,20,20, 13
2740 DATA 20,41,4C,57,41,59,53,20,53,50,4C,49,54,20,38,27, 2F
```

```
2750 DATA 53,20,20,20,20,20,20,20,20,20,20,20,20,4E,45,56,45, 10
2760 DATA 52,20,53,50,4C,49,54,20,34,27,53,20,4F,52,20,35, F2
2770 DATA 27,53,20,20,20,20,20,20,20,20,20,20,20,53,50,4C,49, E4
2780 DATA 54,20,39,27,53,20,55,4E,4C,45,53,53,20,54,48,45, 06
2790 DATA 20,44,45,41,4C,45,52,53,20,55,50,20,43,41,52,44, 25
2800 DATA 20,49,53,20,41,20,31,30,2C,20,41,43,45,20,4F,52, 99
2810 DATA 20,37,20,20,20,20,20,20,20,20,20,20,20,57,49,54,48, 6C
2820 DATA 20,32,27,53,2C,20,33,27,53,2C,20,36,27,53,20,20, 6D
2830 DATA 41,4E,44,20,37,27,53,2C,20,53,50,4C,49,54,20,41, 4A
2840 DATA 47,41,49,4E,53,54,20,44,45,41,4C,45,52,53,20,55, A5
2850 DATA 50,43,41,52,44,53,20,46,52,4F,4D,20,32,20,54,4F, CB
2860 DATA 20,37,2E,2E,2E,20,28,4E,4F,20,4F,54,48,45,52,20, 53
2870 DATA 54,49,4D,45,21,21,21,29,20,20,20,20,20,20,20,20, 0E
2880 DATA 20,20,44,4F,20,4E,4F,54,20,49,4E,53,55,52,45,20, 08
2890 DATA 59,4F,55,52,20,46,49,52,53,54,20,48,41,4E,44,20, 5A
2900 DATA 20,20,20,20,20,20,20,20,20,20,41,4C,57,41,59,53,20, 6B
2910 DATA 49,4E,53,55,52,45,20,49,46,20,54,48,45,20,43,4F, A3
2920 DATA 55,4E,54,20,53,54,41,4E,44,53,20,41,54,20,2B,36, BD
2930 DATA 20,4F,52,20,4D,4F,52,45,21,21,21,20,20,20,20,20, D4
2940 DATA 20,20,20,20,20,42,45,54,20,54,48,45,20,4D,49,4E, 54
2950 DATA 49,4D,55,4D,20,57,48,45,4E,20,54,48,45,20,44,45, 88
2960 DATA 43,4B,20,49,53,20,45,49,54,48,45,52,20,4E,45,55, BB
2970 DATA 54,52,41,4C,20,4F,52,20,4E,45,47,41,54,49,56,45, 22
2980 DATA 20,20,20,20,20,20,20,20,20,20,20,42,45,54,20,32,20, AF
2990 DATA 55,4E,49,54,53,20,57,49,54,48,20,41,20,43,4F,55, 06
3000 DATA 4E,54,20,4F,46,20,2B,31,20,4F,52,20,2B,32,20,20, 57
3010 DATA 20,20,20,20,20,20,20,20,42,45,54,20,34,20,55,4E, 49
3020 DATA 49,54,53,20,57,49,54,48,20,41,20,43,4F,55,4E,54, 9F
3030 DATA 20,4F,46,20,2B,33,20,4F,52,20,2B,34,20,20,20,20, 92
3040 DATA 20,20,20,20,20,20,42,45,54,20,36,20,55,4E,49,54, E3
3050 DATA 53,20,57,49,54,48,20,41,20,43,4F,55,4E,54,20,4F, 0B
3060 DATA 46,20,2B,35,20,4F,52,20,2B,36,20,20,20,20,20,20, D3
3070 DATA 20,20,20,20,41,42,4F,56,45,20,2B,36,2C,20,42,45, 14
3080 DATA 54,20,38,20,55,4E,49,54,53,20,20,20,20,28,42,55, B2
3090 DATA 54,20,44,4F,4E,27,54,20,47,4F,20,46,52,4F,4D,20, AC
3100 DATA 31,20,54,4F,20,38,20,41,4C,4C,20,41,54,20,4F,4E, 63
3110 DATA 43,45,20,42,45,43,41,55,53,45,20,54,48,41,54,20, 74
3120 DATA 57,4F,55,4C,44,20,41,54,54,52,41,43,54,20,41,54, E7
3130 DATA 54,45,4E,54,49,4F,4E,20,49,4E,20,41,20,52,45,41, 18
3140 DATA 4C,20,43,41,53,49,4E,4F,21,21,21,29,20,20,20,20, 4D
3150 DATA 20,20,20,20,20,20,20,49,46,20,54,48,45,20,43,4F,55, A4
3160 DATA 4E,54,20,49,53,20,41,54,20,2D,36,20,4F,52,20,20, 3B
3170 DATA 4D,4F,52,45,20,28,3F,4C,45,53,53,3F,29,20,44,4F, 47
3180 DATA 20,4E,4F,54,20,53,50,4C,49,54,20,41,43,45,53,20, 60
3190 DATA 28,42,45,43,41,55,53,45,20,20,54,48,45,20,44,45, 4A
3200 DATA 43,4B,20,49,53,20,52,49,43,48,20,49,4E,20,4C,4F, 4C
3210 DATA 57,20,56,41,4C,55,45,44,20,43,41,52,44,53,20,41, 72
3220 DATA 4E,44,20,54,48,45,53,45,20,57,4F,55,4C,44,20,42, AA
3230 DATA 45,20,47,4F,4F,44,20,43,41,52,44,53,20,54,4F,20, A8
3240 DATA 44,52,41,57,21,21,21,29,20,20,20,20,20,41,4C,53,4F, 11
3250 DATA 2C,20,41,54,20,54,48,49,53,20,43,4F,55,4E,54,2E, 21
3260 DATA 2E,2E,20,20,44,4F,4E,27,54,20,44,4F,55,42,4C,45, F4
3270 DATA 20,44,4F,57,4E,20,4F,4E,20,48,41,52,44,20,31,30, C9
3280 DATA 20,55,4E,4C,45,53,53,20,54,48,45,20,44,45,41,4C, FA
3290 DATA 45,52,53,20,55,50,20,43,41,52,44,20,4C,49,45,53, 30
3300 DATA 20,42,45,54,57,45,45,4E,20,32,20,41,4E,44,20,36, F5
3310 DATA 20,49,4E,43,4C,55,53,49,56,45,21,21,21,20,20,20, 8A
3320 DATA 20,20,20,20,20,20,20,49,46,20,54,48,45,20,44,45, A3
3330 DATA 41,4C,45,52,20,53,48,4F,57,53,20,37,20,41,4E,44, C5
```

cont. on next page

continued from page 123

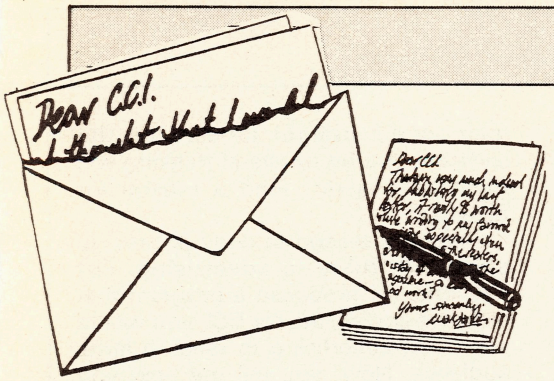
```
3340 DATA 20,54,48,45,20,43,4F,55,4E,54,20,49,53,20,41,54, E0
3350 DATA 20,2B,36,20,4F,52,20,4D,4F,52,45,20,44,4F,4E,27, 9D
3360 DATA 54,20,44,52,41,57,20,54,4F,20,41,20,48,41,4E,44, 9E
3370 DATA 20,4F,46,20,48,41,52,44,20,31,36,20,20,20,20,20, B9
3380 DATA 20,20,20,20,20,41,4E,44,20,49,46,20,59,4F,55,20, 18
3390 DATA 43,41,4E,20,52,45,4D,45,4D,42,45,52,20,41,4C,4C, 52
3400 DATA 20,54,48,41,54,20,54,48,45,4E,20,59,4F,55,52,20, 81
3410 DATA 4E,41,4D,45,27,53,20,50,52,4F,42,41,42,4C,59,20, B7
3420 DATA 45,44,57,49,4E,20,53,49,4C,42,45,52,53,54,41,4E, 45
3430 DATA 47,2E,2E,2E,2E,2E,2E,2E,52,49,47,48,54,3F,20,20, CB
3440 DATA 20,20,20,20,20,20,20,20,2E,20,3C,2D,2D,20,57,48, 6E
3450 DATA 4F,20,50,55,54,20,54,48,41,54,20,54,48,45,52,45, BF
3460 DATA 3F,3F,3F,20,20,20,20,20,20,20,20,20,20,20,20,20, 1C
3470 DATA 20,20,20,20,20,20,20,42,4C,41,43,4B,2D,4A,41,43, 54
3480 DATA 4B,20,28,43,29,20,31,39,38,37,20,42,59,20,4D,41, B5
3490 DATA 52,4B,20,49,20,4D,41,4E,4E,49,4E,47,20,49,56,A0, 42
3500 DATA 8F,4C,41,59,45,D2,46,49,4E,49,53,48,45,C4,42,55, 2F
3510 DATA D4,44,4F,45,D3,44,45,41,4C,45,D2,48,41,56,C5,54, D3
3520 DATA 4F,80,48,10,D0,50,4C,41,D9,48,49,D3,48,A9,34,85, 8E
3530 DATA 01,A0,00,B9,00,E0,99,00,70,C8,D0,F7,EE,D8,FF,EE, 13
3540 DATA D5,FF,D0,EF,A0,07,B9,F2,FF,99,00,C0,88,10,F7,4C, 2B
3550 DATA 00,C0,A9,37,85,01,4C,00,70,00,00,00,CD,FF,CD,FF, A5
3560 DATA 2F,34,00,00,00,00,00,00,00,00,00,00,00,00,00,00, 08
```

MOB Positioning

A.A. Protano

This is a nice easy way to position your sprites. Don't forget to turn them on!

```
1 REM ***********************************
2 REM *        MOB POSITIONING          *
3 REM * USE SYS 49152,X-POS,Y-POS,MOB *
4 REM *  TO RELOCATE CHANGE VAR' A     *
5 REM ***********************************
9 A=49152:S=0
10 FORT=0TO74:READD:C=C+D
11 POKEA,D:A=A+1:NEXTT
12 IF C<>8612 THENPRINT"DATA ERROR"
100 DATA 032,253,174,032,138,173,032,247
110 DATA 183,032,000,226,138,072,032,000
120 DATA 226,224,008,176,049,164,021,192
130 DATA 002,176,043,138,010,170,104,157
140 DATA 001,208,165,020,157,000,208,138
150 DATA 074,170,232,169,000,056,042,202
160 DATA 208,252,166,021,208,009,073,255
170 DATA 045,016,208,141,016,208,096,013
180 DATA 016,208,141,016,208,096,104,076
190 DATA 072,178,096
```



Dear CCI
Reading through the letters pages of your magazine, I cannot help but notice the amount of complaints directed at software houses, the programmers, the games and even the magazines that review them. Whilst many of these complaints may be founded in my opinion the party guilty of commiting the most appalling atrocities as far as the Commodore world is concerned is in fact CBM themselves. Ironic to say the least.

CBM have been churning out domestic computers since 1979 and though the 64 is the best selling home computer in the world, they have given little or no support whatsever to end users. The state the PET, C16/+4, VIC and 128 users find themselves in at the moment is mainly due to the fact that there is a lack of good software for them Commodore should take the lead and develop some decent software for these machines then maybe sales would increase and software houses would be more willing to commit themselves.

As far as the 64 is concerned Commodore can thank their lucky stars that the machine did not flop. The machine is incredibly difficult for beginners to get to grips with PEEK and POKE being the only two sound and graphics commands available and it is only through the continued support of software houses and companies such as DATEC and EVESHAM that it has succeeded. When problems arose such as the 1571 ROMS fiasco Commodore made no real attempt to rectify the situation even when ICPUG offered to help distribute bug free ROMS. It's time that Commodore realised where their profits come from. Computing should provide enjoyment, and in some cases profit. Software houses generally provide enjoyable and entertaining material and reap the rewards. Commodore have taken everything out of the industry without putting anything back. I would be pleased if CBM could comment on this as I have written numerous letters to them (with an SAE) and never received a reply. Thank you for reading this letter.
Yours Sincerely
Stephen Woran, Eire

Dear Stephen
Well, you certainly have built up some frustrations, haven't you? This is not to say we don't agree with what you say. Commodore certainly have made a botch of a great many things in their time. But in their defence, they are acting in a fast changing and very often unforecastable, even uncontrollable world market. So it is not surprising that their business alters direction and leaves behind casualties — either computers or the people who have been unlucky enough to buy them. Where there is no excuse is in not facing up to these problems and explaining themselves or their reasons. The lack of replies to you is an example of this both bad manners and bad for business. However, taking your letter seriously, we passed it on to Commodore U.K. for comment. We always like to play fair. That was over two months ago. In spite of representations to them and to their P.R. consultancy no answer has been forthcoming. We have repeatedly requested an answer and offered space to them to make a reasonable reply. What we have got is zilch, a great big silence. Why? Shame? Laziness? Contempt for you, us or their buyers and, supposedly, loyal customers?

In this case we can't answer and it seems Commodore U.K. won't. The Government of the U.K. have just brought in an edict that says in the Courts, especially in poor old Northern Ireland if an accused remains silent the jury may consider that as a possible indication of guilt. The position of refusing to answer criticism seems like a foolish attitude for Commodore to adopt because the jury in this case is the people it depends on for its continued existence. CBM is often unjustly criticised but here we have seen them acting very stupidly indeed.

Dear CCI
Have you seen the CCI classifieds recently? Your magazine appears, nay, is encouraging software piracy by printing ads for swapping software. Nearly all swapping of software involves illegal duplication, many people offering dozens, even hundreds of priated stuff.

For instance, I asked a serious pirate friend how him and his mates get so much up to date stuff before it's realised in the shops. His reply went something like this:

"I get s———— to copy them for me. He gives me a list of the latest stuff and I then give him a list of what I want plus a box of disks. I only got Star Treck (Firebird) for the 64 last night!"

At this point I cut in and ask where s———— gets his stuff from. He replies:

"From contacts in the U.K. and Sweden."

I ask how these contacts are found. He answers:

"Some are relations or friends or friends, but most were found through reading the classifieds in U.K. magazines such as CCI and C&VG. After a contact is found to be offering a good selection, software is usually sent to and from the U.K. by air mail, Hell, I had leaderboard three months before it came out over here!"

Pirates are easy to spot, phrases like the following are often used:

". . . swap software all latest titles . . ."

". . . wants new swappers, must have very very latest stuff, no beginners . . ." (down under, "beginners" in piratical terms means people who have little knowledge of the subject and less pirated games, tending to offer in exchange for up to date stuff, old, extensively copied junk. I'm pretty sure it has the same meaning in the U.K.).

". . . send lists or disks . . ."

". . . got all the news . . ."

Anyway, nearly half of the ads were for disk game swapping and at least half of those wer sus, why not 'phone randomly and just ask something like:

"Hope you've got the latest stuff, do I know any of your other contact." or "Which copier do you use?"

- Enough about piracy . . .
- Why not do company profiles on the smaller outfits such as Alligata or Atlantis, Bubblebus etc.
- Why not have a disk/tape magazine holding readers program submissions? One Australian Commodore magainze does this to save magazine space and includes freebies such as demos and P.D. software.
- Whatever happened to Tony Crowther?
- Is Orpheus Ltd. still around?

It seems that Jeff Minter has left the '64 for the ST. A pity, I like his '64 games and have bought nearly all of them, Ancipital and a few VIC conversions I still have to get.
See Ya!
Marc Walters, Australia

Dear Marc
You are absolutely right and we are — were — wrong not check those classified ads well enough. Quite clearly many that were appearing were for the illegal copying that you so sharply describe. We have done a combing job through them and checked out a number and you will find that those asking for swaps are now as genuine as we can make them. So take warning you pirate swappers, we are not accepting classified ads. — free or paid — that are offering anything illegal and we will report anyone we suspect to the necessary authorities for action to be taken against them.

Thanks, Marc, once again for pointing

cont. on next page

it out to us, you get the £10.00, the free games, and the CCI Tee-Shirt for the letter of the month.

Dear CCI
May I first say that I read your magazine every month and take great interest in all the comments made on reviews.

However, after reading Dec. Issue, I feel I must comment on a review which was featured.

Upon reading 'Sub Battle Simulator', which I already have a copy, it was apparent to me that the version tested was a disk based one. The cassette version is nowhere near what you stated in your review.

As an example:

1. There is only the Pacific Scenario to play on the cassette version, and although even the instructions contained within the game talked about a German Scenario, I could not find it anywhere.

2. I was not able to play the full war version by the Pacific Scenario, the only options there where target practise or single mission.

3. Only half of the screens stated were included, there was no trace of the conning tower, side on display and binocular views.

I appreciate that cassette versions do not always have the same amount of data on them, because of length of loading time etc, but both your review and the Epyx instructions are misleading the reading public that both versions are the same, which is not true.

I also realise that it is not always possible to play test both versions of a game, however I do think you could mention the difference in versions and rate them accordingly.

This has also happened on 'The President Is Missing' cassette, where half of the options were missing, "so the President had no chance!" I returned this to my local dealer, and exchanged it for sub battle simulator, only to find exactly the same thing (although with the President, 1 cassette version was totally unplayable).

I think the games manufacturers should point out on the packaging that the versions are different, so as not to mislead the buyer.

However, if I want to play such high quality products to the full, I will have to purchase a disk drive, although some people may not be able to afford one, and would have to settle for products on cassette which do not do what the instructions and reviews say that they do.

M. Dunkley, Lancs.

Dear M. Dunkley,
*This a **Mea Culpa** month, you are, of course, right to tell us that very often the cassette versions differ substantially from the disk, and it looks like you have been particularly unlucky in your choice of games. They seem like the most complicated ones and possibly the most interesting too which makes it all the more frustrating for you. Disks, as everyone knows offer technically huge opportunities compared to cassettes and most software companies from other countries hardly believe that in the U.K. we are still largely a cassette-based computer-using population. That's probably because they regard computing as more than just for 'kids to play with' — as it has sadly often been thought of here.*

Yes, you are right in saying that software houses, and we too should be careful to emphasise the differences. Although unfortunately we are often only supplied with one version while the company takes time to release the other.

So the best that can be advised is to save up for a drive — or scan the classified ads for a bargain — when you get one you'll wonder how you lived without it.

Dear CCI
I have a C16 Plus 4 which means I find it difficult to get new tapes. However, I was wondering if I could get hold of 4 computer tapes I have always wanted they are called: Airwolf, Paperboy, Flintstones and Chuckie Eggs 2. Please, please, please could you send me some information about how I can obtain these tapes and how much they cost etc. I would be more than grateful.
Thanks from
Miss Trudy Cawthorne, Cambridge

Dear Trudy,
*Well, you **are** going back in time . . . The best thing you can do is contact the manufacturers. For Airwolf and Paperboy; Elite Systems Tel. 0543-414188. For Flintstones, Grandslam, Tel. 01-247-6434. For the old Chuckie, P&C Ltd, Tel. 061-831-7922. Although it is not easy to find C16 games or any other C16 software these days, many of the manufacturers still have C16 stuff in stock, so if you contact almost any of the big games houses they will probably be able to send you games direct — if you pay for them, of course!*

Dear CCI
I recently read your article about software piracy in CCI. Although I do not agree with your entirely. I do find your opinions more open-minded than most.

For years I have believed software piracy is just a way of thinking. Copying software only becomes piracy when someone says you can't copy it. this may sound straight forward on the surface but a bit of lateral thinking will give the answer: Find a reason for copying.

Finding a reason to copy is easy, to start with there is advertising. For example, if I produced a program that includes advertising for CCI, you would want that advertising to reach a large audience. Now, you tell me how you could do that? In other words, you're selling your product, not the software.

This line of thought has other benefits. You only have to produce a handful of originals and the rest is done by the "pirates" (what were you saying about 8 out of 10 people prefe piracy).

Also, the advertisers would put more money into the development of better software. This is obvious because the better software would be copied and used more regularly. Why can't the best word processor be sponsored by Pepsi?

I have had VERY strong views about software piracy in the past and can not believe how narrow minded people can be. perhaps I should have shouted a long time ago but it's better late than never.

I would really like to hear other peoples views on this. Please can you do a follow up article. At least print this letter with my address.

Thank you for your time. Look forward to hear from you soon.
Yours sincerely,
Mark Ford, Luton

Dear Mark,
Peter Gerrard's article on Piracy was expressing his own opinion. Although many people, we are sure, share it. You are right in saying that if you want an advertisement to work it has to reach out to as many people as possible, but if you are producing something original — like Peter Gerrard's article itself, you — or he — are entitled to receive the proper reward for it. The same applies to 'created' software — or anything else that is not selling — or publicising something. but your idea of sponsorship for software is already being taken up by the recently reported U.S. Gold/Pepsi Cola link up. Although there is always a trade-off in that sort of thing too. Such as sporting events being wrongly, in our opinion, allowed to be sponsored by totally inappropriate organisations like tobacco companies. We would certainly, like you, be interested in hearing other people's opinions on the subject.

Do CCI readers want sponsorship by tobacco companies, for instance, so that they can have cheaper software? Should piracy be freely allowed? Or should pirates be strung from the yardarm? Let us know what you think.

CLASSIFIED

Clearing out. 160 = Commodore magazines. only £70. Buyer collects. Mr. Paul Eeves. 3 Stonecross House, Gamble Rd, Portsmouth, Hants.

Swappers C64 freak wants to swap only the hottest stuff. No beginners. All letters will be answered. No beginners. All letters will be answered. Send discs or lists to: Raymond Sivertsen, Tverrelvdalen 9500 Alta, Norway.

U.K. conferences on the only hot BBS in England. Call it now and see what you've been missing. 0905-52536 or 0905 754127.

MPS Printer as new. Plus free quality software on disc or tape £60. Phone: (0273) 734283. Or write to: Job, 45 Blenheim Court, Hove, Sussex. BN3 4AJ.

C64 penpals wanted all over the world. Please write to: GE Mater PO Box 1704 Belville 7535 S.A.

Wanted for 64/128 a copy of multi-plan spreadsheet, plus manual. Also for 64/128 colour monitor. Phone 0282 843276 after 6pm.

CBM Pet, 3040 disco drive 3022 printer, some discs, offerd over £120. Phone Redditch 0527 22566.

C64 For Sale + 1541 drive + many games and software, modem for £250 ono. Also CBM MPS IJ OOC colour printer. Phone 021-445 3874.

C64 Excelerator + disc drive, C2N datasette, 1520 printer/ plotter dust covers, blank discs and lockable box, easy script, easy file, future finance, intro to basic PTs, all original boxes, £180. Tel. Letchworth (0462) 672453.

C64 For Sale plus peripherals, E.G. Joystick, programs, write to Lionel Liew, 23 Ong Hap Leong, Kuching, Sarawak, Malaysia, 93200.

C64, Tape Deck, 1541 disc drive, fast copy cartridge, joy- stick, plus discs, games and computer books, £275. Tel. (0753) 853220.

CBM 64 Excelerator disc drive, new sum line case, 2 data cassettes, 2 joysticks, loads of games, must sell, £200. Simon (0322) 77159.

Wanted, Amiga Contacts. Write to: Jan Gupolentops, Wygmaapse STW. 138 2991 Keffs-Haacht Belgium.

Wanted Amiga Contacts. All letters answered. Write to Mikael Kvale, Kirkegaten 26, N-4890 Grimstad, Norway.

Canadian Wants To swap info. Discs and lists to: Tom Slama, 1203 Glen-ora Drive, London, Ontario, Canada, N5X 2P6.

C64 Users all over the world. Latest stuff on discs etc. Send discs and letters to 'Alpa One', Lancaster Gate, 100 Flat 19, London W2, England.

For Sale, C64, 1541 disc drive, data-sette, two joysticks, 20 blank Maxell discs and games, £255. Could deliver. Phone (0203) 304588.

C64 owner wants to swap software all over the world. Disc only to David Rowlands, 128 Ladywood Road, Modbury Heights 5092, South Australia OZ.

C64 User wishes to swap games and lists. Send discs and list to: Dave Lewis, 185 Fox- borough Gardens, London SE4 1HS.

For Sale The Works, word processor, spreadsheet, data- base, for only £45. Tel. Jabbar Rafique on (0782) 320273.

C64 owner wants to swap games, all over the world (discs only), send lists or discs to: Dave Hankins, 43 Mal-vern Road, Goole, Humberside, DN14 5HU, England.

New Amiga user wants to contact other users to swap hints and soft-ware etc. Letters, discs, lists etc to: Wayne, 42 Menai Way, Trowbrige, Cardiff or Tel (after 6pm) (0222) 791854.

Amiga 1081, VDU for sale at £180. Tel. A.J. Clayton on Fleet (0253) 621609 after 7.30pm.

C64 Expert cartridge user wants to swap games demos, discs only to: G. Letting, 91 Micklow Close, Redcar, Cleve- land TS10 4NS.

C64 Owner wants to swap software all over the world. Discs only to: Kjetil J. Slattli, Virak E6- 41 8520 Ankensstrand, Norway.

HERE'S MY CLASSIFIED AD . . .

		(Private Readers — Free-Max 32 words) Trade Advertisements — 50p per word			

I make this _____ words at _____ p per word, so I enclose £ _____

Please continue on a separate sheet of paper for trade advertisements

Name _____

Address _____

Tel: _____

Send your classified entries to:
Classified Department,
Commodore Computing International Magazine.
40 Bowling Green Lane, London EC1R ONE
Tel: 01-278 0333 Ext.280

CLASSIFIED

P.B.M. shipwreck. People needed to help make up teams of twenty. Can you survive? Just try. Cash prizes. S.A.E. to: V.I.P. 19 Hayfell Ave, Westgate, Morecambe, Lancs.

C128, 1541 disc drive C2N speech synth. £300 worth of games on disc and tapes, pro joystick. Offers. Tel. 041-554-9108.

AMIGA user wants to swap the very latest stuff. Send discs to. Tore Fredriksen. 23,9400 Harstad Norway.

AMIGA user wants to swap all the latest hot stuff. 100% reply. Overseas welcome. Please write to: The Hollies, Shefford, Beds, SG17 5BX.

Wanted Circuit diagram of Genlock and Videodigitizer for the Amiga (500) also interstedin pen – friends. Write to: Johan Stenfors, Olstad Risinge, S-61200 Finspong, Sweden.

C64 Seikosa Printer, Datasette, psu, all boxed tape software for only £160 ono. Phone now. Bob on 0274-602993.

C64 user wishes to swap software on disc with other user. Send to: Paul Dyson 48 Askam Ave, Pontefract, Wet Yorks WF8 2PN.

AMIGA A500 plus 5.5 disc drive and software, boxed as new and still under guarantee. Will sell for £500 ono. Tel. 01-571 9324.

Calling world wide Amiga users send me your best, I'll send you the best of the rest. Send disc to: Ror, 17 Rosedale AVe, Blackpool, England. FY4 4HR. or Tel. 0253-64178.

Swapping crazy. We have a long list (over 1000) on the C64 disc and we want more contacts. Please send letter to: Svein Willassen. Rekdalsvegen 32, 5069 Stravnserend, Bergen, Norway.

USA Amiga owner would like to sell originals: Dragon Lair, Capitain Hybris, Rocket Ranger, etc. Contact: Morgan, 100 West 83rd St. New York, 10024 USA.

For Sale CBM 128, 1570 disc drive, £100 worth of software, joystick, books, mags. etc will sell for £350. Tel. John 0532-774138.

1520 Printer Plotter £60. Plus paper 1515 £78. Disc and tape copier £15. and compdisk diacs D/A 68p. Also blank tapes. Tel. Gobind 514-3643 after 8pm.

For Sale Commodore 64 1541 drive and Citizen 120D printer hardly used, plus £1000 worth of software plus other goodies £350 o.n.o. Phone (0244) 531198.

C128, 1570 disc drive, amber monitor, star NL-10 printer for sale, all boxed. With books, mags and a huge range of business and games software. £560 o.n.o. May separate. Phone: 039-675-426.

Wanted C16 and Dragon rampacks, light pens, serious software other add-ons. Also Jupiter Ace working also Dragon-forth W,H,Y,? Write to: Morgan, 15 The Crescent, Colne, Lancs BB8 9EU.

NORWEGIAN software is a comp. club for people of all ages. Are you interested? Write to: N/S c.o. Tor-Einar Sarnbjo. Lundsalleen 26B, N?2000, Lillestroem, Norway.

Amiga owner wants to swap software with anyone around the world. Send lists + discs to: Steve, PO Box 1730 QLD. OZ. All letters answered.

C128 with integral disc drive, 1901 colour moniter, MPS801 printer, data cassette, software, games, discs, manuals and books, vgc, £475 o.n.o. Phone Owen on: 01-874-4262.

For Sale C128, 1571 disc drive, tape recorder, joystick, discs, books and mags, excellent condition for £400. Phone: 01-404 9920.

C64 and 1541 drive for sale. £60 each. Tel. Larbert. (0324) 556993. Evenings only.

HERE'S MY CLASSIFIED AD . . .

		(Private Readers — Free-Max 32 words) Trade Advertisements — 50p per word			

I make this_____ words at _____ p per word, so I enclose £ _____

Please continue on a separate sheet of paper for trade advertisements

Name _____

Address _____

Tel: _____

Send your classified entries to:
Classified Department,
Commodore Computing International Magazine.
40 Bowling Green Lane, London EC1R ONE
Tel: 01-278 0333 Ext.280

COMMODORE MAGENTA PAGES

Titles shown are for comm. 64 We also have Amiga, Vic 20, Plus 4/C16

budgetsoft

Send for full Price List

£1.95
ARCADIA
GALACTIC GARDENER
WORLD CUP FOOTBALL
PYRAMID
BEAKY AND EGG SNATCHER
GOLF

£2.95
THE REAL YOU
PCW GAMES COLLECTION
BIOLOGY
GEOGRAPHY
HISTORY
GERMAN
SEC.DIARY OF ADRIAN MOLE
ENIGMA FORCE
STARION
ASSAULT MACHINE
WARRIOR II
STOCK CAR
CYBERTRON MISSION
BUMBLEBEE
FELIX IN THE FACTORY
FRENZY
GHOULS
SWOOP
TRANS-ATLANTIC BALLOON
GROWING PAINS OF AD MOLE
ELECTION
SHERLOCK HOLMES
PARADROID
FA CUP FOTBALL
TOMAHAWK
BATALYX
HIDE AND SEEK
DANTE'S INFERNO
HEARTLAND
PAZAAZ

£3.95
FOOTBALL MANAGER
SUPER SUNDAY
HEADCOACH
PRESIDENT
FA CUP FOOTBALL 87
FORECASTER
PROJECT PLANNER
NUMBERS AT WORK
DECISION MAKER
ENTREPRENEUR
FORECASTER(DISC)
PROJECT PLANNER(DISC)
NUMBERS AT WORK(DISC)
DECISION MAKER(DISC)
HENRY'S HOUSE VOL.1
HENRY'S HOUSE VOL.2
TURBO 64
PILOT 64
MY CHESS II
DAN DARE
JET SET WILLIE
INTRO TO BASIC VOL 1
INTRO TO BASIC VOL 2
CHUCKIE EGG
MANIC MINER
BOUNTY BOB STRIKES BACK
ON COURT BASEBALL
BLACK WYCHE
SKY RUNNER
BOULDERDASH
BOULDERDASH II
AVENGER
FUTURE KNIGHT

£4.95
MICRO VALUE(4 GAMES)
JET SET WILLY 2
MICRO VALUE 3(4 GAMES)
SOLDIER ONE
SHADOWS ROAD
PARADROID/URIDIUM
PSI TRADING
PARALAX
LEGEND OF KAGE
MANDRAGORE
MIND SHADOW
LITTLE COMPUTER PEOPLE
SIMOTEP
BLUMSDER ON ZINDERNAUF
FANTASY FIVE (DISC)
SUSPENDED (DISC)
THE YOUNG ONES
TOUCHDOWN FOOTBALL
AUF WIEDERSEHEN MONTY
CONVOY RAIDER
JACK THE NIPPER
8.24
QUARTET
SUPER SPRINT
PITSTOP
BACK TO THE FUTURE
HACKER
SPORTING CLASSICS
ACE
MYSTERY OF NILE
ON THE TILES
SIDEWIZE
SCARY MONSTERS
SOLOMON'S KEY
RYGAR
TRANTOR
BLADE RUNNER
CAPTAIN AMERICA
5 STAR GAMES 2
COMPUTERS HITS 5
STAR PAWS
NOW GAMES III
MARBLE MADNESS
ARAC
LEADERBOARD
PIT STOP
SCOOBY DOO
SUPER STAR PING PONG
TAG TEAM WRESTLING/KAR
GAUNTLET
GAUNTLET DEEPER DUNGEO
DONKEY KONG
BREAKTHRU
SHORT CIRCUIT
BEST OF BEYOND
BOMB JACK II

£5.95
KENSINGTON
ROBOTRON
WILD WEST (DISC)
BUG BLITZ (DISC)
MURDER ON ZINDERNEUF
SCARABEUS DISC
ZORRO
WIZARD

£9.95
TOUCHDOWN FOOTBALL (DISC)
MUSIC CONSTRUCT.SET(DISK)
BRENDAN'S BASIC
ACTION PACK 3
JEWELS OF DARKNESS
BOULDERDISH CONST. KIT
MICRO VALUE 3
ROAD RUNNER
RENEGADE
STAR GAMES II
FLIGHTPATH 737
THUNDERCATS
BUBBLE BOBBLE
6 HIT PACK VOL.II
BASKETBALL(DISC)
BASEBALL(DISC)

£11.95
EXPRESS RAIDER(DISC)
KNIGHT GAMES II(DISC)
OCTAPOLIS(DISC)
GUNSLINGER(DISC)
ALTERNATE REALITY(DISC)
221B BAKER STREET(DISC)
CROSS CHECK(DISC)
CAPTAIN AMERICA (DISC)
FUTURE FINANCE (DISC)
ALTER EGO FEMALE(DISC)
DEATHSCAPE (DISC)
CHALLENGE / GOBOTS(DISC)
NYBBLE(DISC)
DISPLE UP (DISC)
10 GREAT GAMES
BLACK MAGIC(DISC)
WINTER GAMES(DISC)
THUNDERCATS (DISC)
BUGGY BOY
FIVE STAR GAMES 2
STAR PAWS
SPACE HARRIER (DISC)
ELITE COLLECTION(DISC)
INTERNATIONAL KARATE(DISC)
HEADCOACH (DISC)
PRESIDENT (DISC)
GOLDEN OLDIES (DISC)
PUB GAMES (DISC)
FOOTBALL MANAGER(DISC)
ARAC (DISC)
ADDICTABALL
ELITE COLLECTION
FOOTBALL MANAGER 2

Post and packing: 1-3 titles 75p, 4 or more £1. Overseas £1.30 per title.
PERIPHERALS: £1 per item. Overseas £1.80
Please send cheques/P.O.'s to: Budgetsoft, Dept CI, 33 Little Breach, Chichester, W.Sussex, PO19 4TY.

CROYDON COMPUTER CENTRE

24A Brigstock Road, Thornton Heath, Surrey, CR4 7JJ Tel: 01 683 2646

COMPUTER SERVICING

(Est'd since 1979)
We repair — on the premises — quick turnround
* Commodore
* BBC & Electron (Approved Service Centre)
* Amstrad & Torch (Approved Service Centre)
* Disc Drives, Printers, Monitors

Mail Orders by phone Access & Visa accepted

BYTES & PIECES

This is the much acclaimed word processor for the 128 called 'Brilliant' by CCI. So move into state of the art and graphic environment for only **£32** from the UK agents. Make your 128 really perform!! Now being used in schools. **Cannon 128** the copier for the 128 now down in price to **£9.95.**

Font Master 128

Copyright (c) 1985 Xetec, Inc. All rights reserved.

37 Cecil Street , Lytham, Lancs FY8 5NN

Disks, DS, price per 10 with labels

5.25" tpi 48	£3.60	3.5" 135 tpi	£9.50
disk notcher for 5.25"	£3.50		

Ribbons, fabric, unless stated otherwise

4023 m/s	£3.35	MPS 801	£2.85
6400 m/s	£2.30	MPS 803	£2.95
6400	£3.05	VIC 1515	£2.50
Citizen 120D	£4.05	VIC 1525	£2.50
Epson FX80	£3.15	Star NL10	£4.70

T-SYSTEMS LTD
The Signal Cabin, 61 High Street, Orpington, Kent BR6 0JF
ACCESS Card accepted, Tel: 0689 22196
ALL PRICES INCLUDE VAT & DELIVERY

Guaranteed Disks

DS/DD48 tpi 5¼" **33p each** min qty 25 Units of 25 (38p inc)

DS/DD 135 tpi 3.5" **79p each** min qty 10 Units of 10 (91p inc)

All prices + VAT **FREE** delivery (UK)

0705 511439 (24 hour disk hot line)
0705 511648 (Amiga hardware)
Fax No: 0705 511646

Cheques/P.O. to:

Athene Consultants Media Centre, Dept CCI, 16 Stoke Road, Gosport Hants, PO12 1JB.
Please call for discounts on quantity

SPARES REPAIRS SALES

all makes of computers & peripherals
Fast Reliable Guaranteed Service

Contact Dave Barber T.Eng., AMIERE

db ELECTRONIC SERVICES

205 Meadgate Avenue, Gt. Baddow, Chelmsford, Essex. CM2 7NJ
Tel: 0245 - 260874

COMMODORE REPAIRS

(with FREE extended guarantee)

COMMODORE 64	£28.70
COMMODORE 128	£36.70
COMMODORE C16/+4/VIC 20	£20.70

Price is all inclusive and we guarantee the whole computer for six months

KPR MICRO,
34, Petunia Crescent, Springfield, Chelmsford, Essex CM1 5YP
Tel: 0245 - 468554

COMMODORE MAGENTA PAGES

PROBLEMS WITH YOUR COMMODORE ?

FOR FAST, RELIABLE AND PROFESSIONAL REPAIRS AT COMPETITIVE PRICES

C64 Repairs £19.95 inc. VAT + Free Postage & Packing

P M ENGINEERING

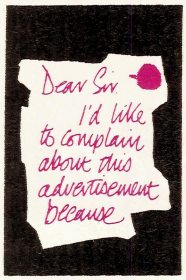
UNIT 8, NEW ROAD, ST. IVES,
CAMBRIDGESHIRE, PE17 4BG

VISA

ST. IVES (0480) 61394

We can also supply you with:
Hardware, Software, Blank Disks, Accessories & Spare Parts

Access



Most advertisements are legal, decent, honest and truthful. A few are not, and, like you, we want them stopped.

If you would like to know more about how to make complaints, please send for our booklet: 'The Do's and Don'ts of Complaining'. It's free.

The Advertising Standards Authority

ASA Ltd., Dept. Z, Brook House, Torrington Place, London WC1E 7HN

COMMODORE 64/128. CASSETTE ONLY

X RATED ADULTS ONLY GAME

FANTASY

ONLY £6.50

Loosen your collar, get out your JOYSTICK and get stuck in. By the time you finish you'll be exhausted.

WARNING if you are easily offended do NOT order this game.

R'n'H MICROTEC
32 Hazell Way
Stoke Poges
BUCKS SL2 44D

ONLY AVAILABLE BY MAIL ORDER

TEACHERS ····· STUDENTS

NEW RANGE OF EDUCATIONAL SOFTWARE AVAILABLE FOR COMMODORE 64/128 USERS

GEOGRAPHY - 3
BUSINESS ORGANISATION - 1
BUSINESS ORGANISATION - 2
CHEMISTRY - 1
CHEMISTRY - 2
BIOLOGY - 1
BIOLOGY - 2
PHYSICS - 1
PHYSICS - 2
GEOGRAPHY - 1
GEOGRAPHY - 2

DISK - 10.95
TAPE - 8.95

PRICES INCLUDE P & P. MAKE CHEQUES PAYABLE TO SOFTWARE HORIZIONS
VISA CUSTOMERS WELCOME
SOFTWARE HORIZIONS: THE MALL: MAIN ST
WICKLOW TOWN: CO WICKLOW : REP OF IRELAND
PHONE 0404-69245

TO SET THE PAGE
FILL THIS SPACE!
CALL 01-278 0333 EXT 280
ooo NOW!

COMMODORE SUPPLIES

C64 Power pack (Re-furnished)	14.95
Dust cover (please state machine)	3.25
C3N (C-16) data rec	19.95
C16 Power pack (new)	13.95
50 5¼" DS/DD	20.00

Prices include VAT & P&P. Cheque to Omnidale Ltd. 23 Curzon Street, Derby. Tel: 0332 291219

ADVERTISERS DIRECTORY

16 Bit Software	111	Datel Electronics	42,43,90,91
A.M.S.	27	Dimension Computers	19
A.R.B. Computers	63	Delta Pi	63
D.B. Electronics	Magenta Pages	Digital Integration	81
E.E.C. Computers	111	Easy Print	40
F.S.S.L.	7	Evesham Micros	23
I.C.P.U.G.	101	Gremlin Graphics	65
K.P.R. Micros	Magenta Pages	Harp Electronics	103
M.C.E. Services	Magenta Pages	Harwood Computers	35
P.M. Engineering	Magenta Pages	Lan Computers	97
R & A.J. Preston	63	Mastertronic	57,77,85
R.'N' M. Microtec	Magenta Pages	Meedmore	19
U.S. Gold	52,60,70,71	Megaland	87
Y2 Computing	105	Microsnips	12
Adam Soft	105	Microprose	79
Amiga P.D. Library	105	Omnidale	Magenta Pages
Amiga Users Group	105	Postronix	I.F.C. 3
Alladink	Magenta Pages	Power Computing	63
Anco	I.B.C.	Precision Software	73
Athene	Magenta Pages	Speedysoft	40
Avon Printer Technology	101	Selec	101
Bowie Electronics	103	Technical Developments	38
Budget Soft	Magenta Pages	Trade Link	101
Bytes & Piccs	Magenta Pages	Turtlesoft	95
Calco	39	Trilogic	20
Centec	31	The Software Club	Magenta Pages
Compmart	9,17	Tensal Technology	Magenta Pages
Compnet	25	Yorcom	39
Croydon Computer Centre	Magenta Pages		

ALADDINK

FABRIC RIBBON CASSETTE RE-INKING
Trial offer: £1.45 per ribbon
Post used cassettes with payment to:
ALADDINK (Dept CC), FREEPOST
Eyemouth, TD14 5BR
(No stamp required)
Tel: 08907 50965

PLUS4 FORTH DISK. £9.99
MetacomPiler FIG/79. 32Kbytes.
Auto Tape/disk and Start.
HIRES: DRAW & DUMP. DEFINABLE CHARS: Complete with 50 + commented screens.
TENSAL TECHNOLOGY
15 Penrice Close, W-S-M, Avon BS22 9AH
Tel: (0934) 627539

AMIGA OWNERS

TRY SOFTWARE BEFORE YOU BUY IT
Public Domain program available at £2.00 each
Send S.A.E. to
DEPT CCI: PO Box 155
The Software Club
Cardiff CF5 4YA

COMPUTER REPAIRS

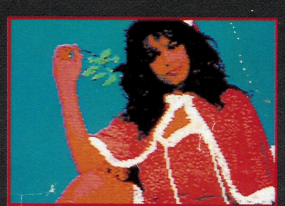
SPECTRUM, COMMODORE, AMSTRAD, ACORN, BBC etc
Fixed charge repairs on all makes
Please ring for details:
MCE SERVICES
33 Albert Street,
Mansfield, Notts NG18 1EA
Tel. 0623 653512

ANCO

Maria's Christmas Box

AMIGA

ATARI ST



COMMODORE 64

AMIGA	£14.95
ATARI ST	£14.95
COMMODORE 64	£ 9.95 (Cass)
	£12.95 (Disk)
SPECTRUM	£ 9.95
AMSTRAD	£ 9.95
MSX	£ 9.95
IBM PC	£19.95 (3¼ & 5¼
EGA-CGA	same box)

Emlyn Hughes

INTERNATIONAL SOCCER

RECOMMENDED BY MATCH

Quite simply the best football simulation available for the 64 Nothing short of superb.

ZZAP 64

AVAILABLE NOW FOR COMMODORE 64

£9.95 tape £12.95 disk

Coming soon for Spectrum & Amstrad

Audiogenic

Audiogenic Software Limited, Winchester House, Canning Road, Harrow HA3 7SJ, England

Order by phone on 01 861 1166

Access VISA